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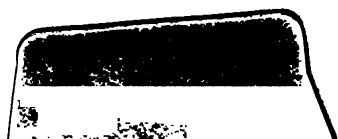
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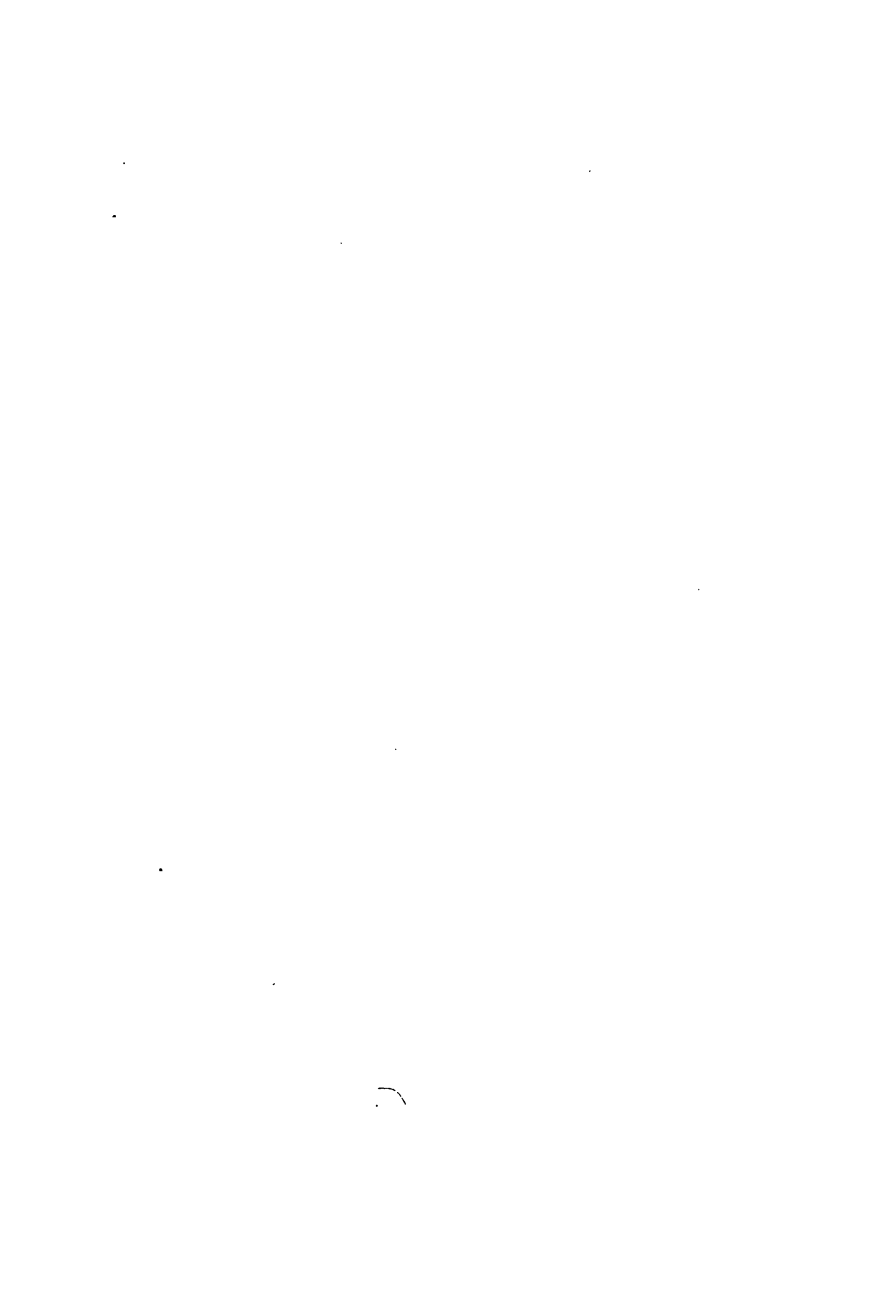
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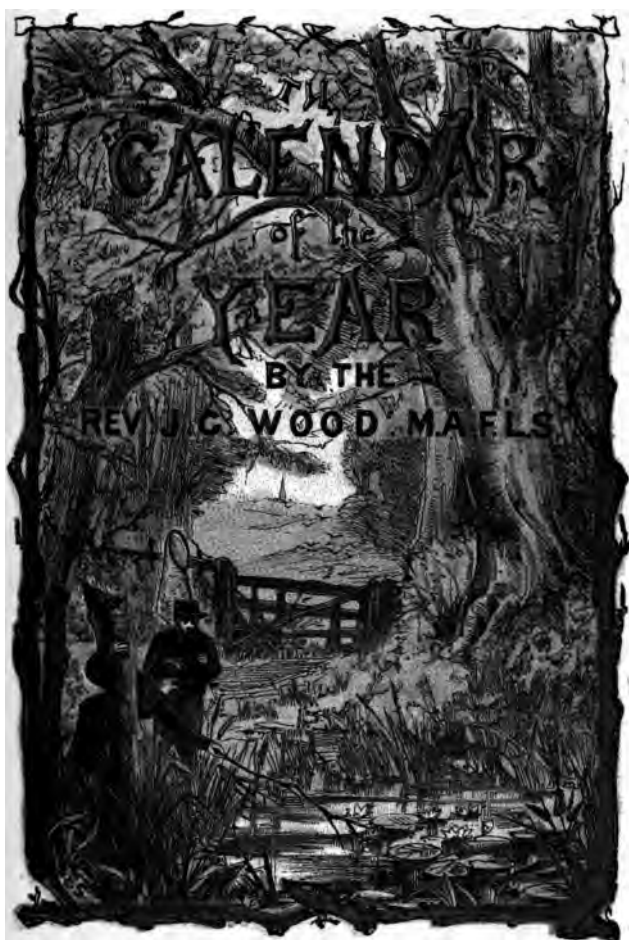


THE
CALENDAR OF THE MONTHS.

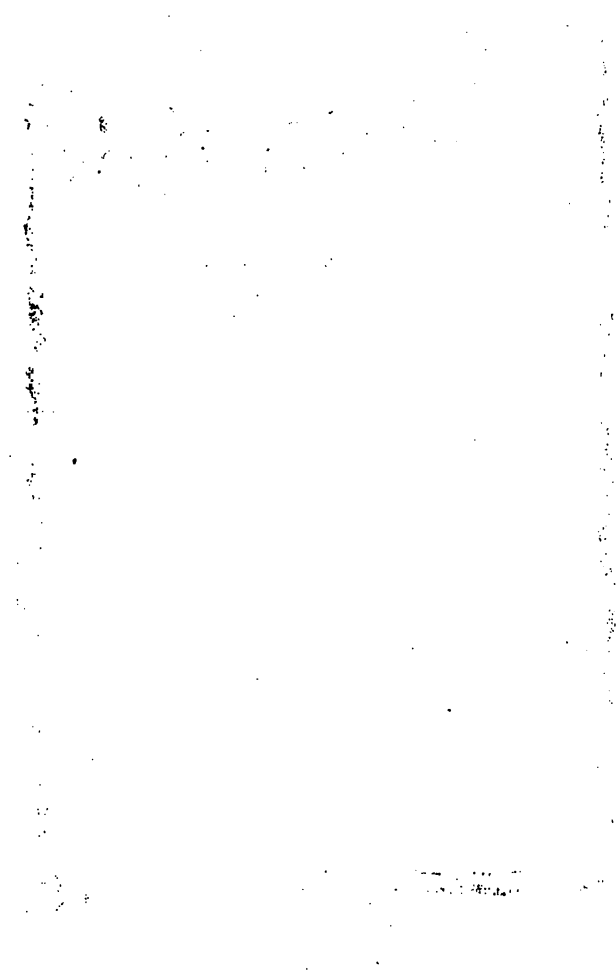




FRONTISPIECE.



LONDON: GEORGE ROUTLEDGE & SONS.



THE
CALENDAR OF THE MONTHS;

OR,
THE YOUNG NATURALIST ABROAD.

BY
THE REV. J. G. WOOD, M.A.

WITH NUMEROUS ILLUSTRATIONS.



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PREFACE.

MANY persons who possess the capacity for appreciating Nature, but who have had little or no practical experience in observation, are deterred from the study of Natural History, because they do not know where or when to search for certain objects, whether animal or vegetable. In consequence they feel themselves first bewildered, then disheartened, at the multiplicity and variety of sights that pass before them, and, finally, abandon the pursuit of this branch of science through sheer disgust at their repeated failures. They have failed, not because they lacked appreciation, not because their senses were in any way deficient, but simply because they did not know where to begin.

To supply this want, one which I myself felt severely when a youth absolutely ignorant even of the terms genus and species, is the object of this little work. The greater part of it comes either from my own diaries or from observations made for the express purpose, and the remainder *is necessarily* taken from standard works on

botany and zoology. These works, however, are for the most part too large for ordinary use, too costly for the pockets of most boys, and too technically scientific to be of much use to those who are unskilled in the subject.

I have, therefore, taken the year, month by month, and given the names and a brief history of the principal plants, animals, birds, reptiles, insects, and other creatures that may be expected in those months. Some are necessarily mentioned several times, as, for example, the flowering and seed-time of plants, the arrival, departure, song, egg-laying, and hatching of birds, the larval, pupal, and perfect states of insects, and so forth.

Then, equally of necessity, the time mentioned can be but approximate, because it must vary with the geography of the place or the character of the season. Still, if anyone wishes to study practical Natural History through the year, and takes this little volume as a guide, he will find that at the end of the year he will have learned to appreciate Nature a hundred times better than he did before, because he will have learned to understand her better.

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THE
CALENDAR OF THE MONTHS.

JANUARY.

THIS is not a month in which the young Naturalist is likely to feel much encouragement. Granted that the weather be, as it generally is in January, severely cold, there is very little either of vegetable or animal life to be seen. The days are longer than in December, and the sun rises perceptibly higher almost every day, and the places of his rising and setting become wider and wider apart. Yet, according to the old proverb, "as the day lengthens the cold strengthens," and throughout the whole of January we may expect to find both the earth and water bound in icy chains.

Yet, unpromising as the aspect of nature may be, I would not discourage the novice from beginning his work in January, and for this reason. I firmly believe that many persons who wait until the bright summer months before *beginning their practical studies of Nature*, are

B

much more likely to abandon that most delightful of all pursuits, than would be the case if they had commenced in the beginning of the year. In the summer time there is such a wealth of animal and vegetable life, that the young naturalist becomes quite bewildered with the enormous and ever-changing variety of objects, finds himself forgetting faster than he learns, and at last gives up the whole subject in despair.

Now, if he had begun to study Nature in January, he would have passed through a graduated training both of eye and mind before he came to the summer months, and his memory would retain that which his eye saw. As there are scarcely any flowers in January, the few that do appear are easily learned, and the young observer is soon able to recognize them when he sees them, to know the localities in which they are likely to be found, and has plenty of time to examine their structure. Then, as soon as a new flower shows itself, he is sure to detect it, and so nearly day by day, and almost unceasingly, he adds to his stock of knowledge as well as to his power of acquiring and retaining it. It is just the same with the birds, insects, and other living creatures. Those which he will see in the fields, along the hedgerows, or even in *the copses*, are comparatively few, and can soon *be learned*.

There is nothing easier, for example, than learning the notes of the birds, a branch of knowledge which is simply invaluable, as it often happens that a bird betrays itself by its note, while the creature itself is concealed. I suppose that the first notes thus learned will be the short, bright song of the Redbreast, which will be repeated over and over again as the bird sits on the leafless boughs, rejoicing in the bright sunshine, no matter how cold the weather may be. Next comes the song of the Wren, so loud that no one who was unacquainted with it could believe that it proceeds from the little pinch of feathers that threads its way in and out of the underwood, more like a mouse than a bird. Then come the full, rich tones of the Thrush and Blackbird, not to mention the Missel Thrush, and the Hedge Accentor, popularly called the Hedge Sparrow. As for the Skylark, there is no possibility of mistaking its melody. An ear thus trained through January, will be ready to catch up the first notes of the early spring singers, such as the Goldfinch, the Woodlark, and the almost articulate monotone of the Yellow Hammer. And, no matter whether he sees the bird or not, the first notes which he hears will designate the bird as clearly as if its name had been written.

Suppose, however, that the young naturalist were to begin his studies of bird song in the

early summer, when they are all in full voice, he would be utterly bewildered among them, and would scarcely be able to distinguish one from another.

When walking with the late lamented Charles Waterton in the grounds attached to Walton Hall, I was often equally surprised and delighted to note the manner in which he would detect the slightest note of a bird, even though it were at a great distance, and would mutter almost unconsciously the name of a bird which he had recognised by means of a sound so faint as scarcely to be heard by anyone but a practised naturalist. He was then well over eighty years of age, of which time more than seventy had been spent in the constant and close observation of Nature; and thus it was, that amid the variety of sounds and sights with which he was surrounded, there was no confusion in his mind, which analyzed them all with as much precision as an artist's eye analyzes the subtle tints of a painting, or the ear of a musician the interwoven harmonies of a fugue.

I have a friend, an admirable ornithologist, who is so short-sighted that by means of the eye alone, he could not distinguish a Sparrow from a Redbreast across an ordinary room. But he has made his ear serve him instead of his eyes, *and the consequence is*, that when he is out with *a brother ornithologist*, he often is the first to



HEDGE SPARROW.

detect a bird, his ear having recognised its notes long before it comes in sight.

It is just the same with the insects. During the warm months of the year, they exist in such swarms that the novice feels himself quite inadequate to remember them all, while at the same time he does not like deliberately to select only a few of the most conspicuous of each order—a plan which is the only one by which he can hope to avoid mental confusion. Suppose, however, that he had begun his studies in January, he would have learned to discriminate between them as they successively made their appearance. So, I say, let the student begin to study in January; work steadily through the year, not burdening the memory with too many subjects at a time, and by the following January he will be prepared for a systematic series of observations which ought to be of the greatest service to practical Natural History. Above all, never let the note-book be out of the pocket. There is nothing so treacherous as the memory, which is sure to fail just at the moment when it is most wanted. So, keep the note-book at hand, and cultivate a talent for sketching, no matter how rudely, everything that is worthy of notice, for a day will surely come when the roughest sketches, provided that they only tell their story, will be of incalculable value.

We will now see what is likely to be found in

January. Flowers are necessarily few, but yet there are one or two which do not refuse to blossom even in this inclement time of year. First in beauty and dimensions come the common Gorse, Furze, or Whin, as the Scotch call it, whose shining golden flowers glitter even in the coldest days of winter. Then, the Purple Dead Nettle is always to be found in flower, respecting which plant I must quote a passage from Ruskin's "Political Economy of Art." Treating of the right and wrong mode of education, he proceeds to say—

"There is not one student, no, not one man, in a thousand, who can feel the beauty of a *system*, or even take it clearly into his head ; but nearly all men can understand, and most will be interested in, the *facts* which bear on daily life. Botanists have discovered some wonderful connection between nettles and figs, which a cow-boy, who will never see a ripe fig in his life, need not be at all troubled about ; but it will be interesting to him to know what effect nettles have on hay, and what taste they will give to porridge ; and it will give him nearly a new life if he can be got but once, in a spring time, to look at the beautiful circlet of dead-nettle blossoms, and work out with his school-master the curves of its petals, and the way it is set on its central mast."

Berries still remain on many trees, and are

8 *The Calendar of the Months.*

likely to remain there until eaten by the birds. For example, there are the dull-red hawthorn berries, softened and mellowed by the frost, the mountain-ash berries, the still scarlet "hips" of the wild rose, and the brown-green ivy berries, in their radiating coronet of spikes ; and still in the hedges hang the too-tempting berries of the lovely Nightshade, which have allured many a heedless child to the very verge of death.

As for insects, they can hardly be considered at all, as scarcely any of them are abroad, except that, on a fine day, a few gnats may be seen in sunshiny and sheltered places, and an occasional Brimstone Butterfly makes its appearance for an hour or two, and then re-seeks its shelter. The insect world in general is either in its undeveloped stages, or is hidden away beneath the earth, or in some out-of-the-way crannies. Should the month prove to be a mild one, we may probably expect to see towards the end of it a few Dor or Watchman Beetles circling round with their dull, booming hum, and in the evening a Water Beetle or two may issue from the pond and take to the air.

Should the month prove a severe one, the young naturalist may have an opportunity of noticing the curious effect which cold has upon the colour of fur and feathers. The bird in which he is most likely to perceive this phenomenon is the Lapland Bunting (*Plectrophanes*



LAPLAND BUNTING.

nivalis), popularly called the Snow Bunting, or Snow-fleck, in consequence of the whiteness of its winter plumage. Though the summer plumage is mostly brown and black, with a little white, in the winter white becomes the chief colour, the wings and tail, however, generally retaining their blackness.

Still, it is a very variable bird in this respect, the amount of white depending not so much on the severity of the cold as on the constitution of the individual. Were it wholly dependent on the temperature, we should find that all the birds of the same flock would be coloured in exactly the same manner, whereas it is scarcely possible to find two which are precisely alike in the relative proportions of light and dark feathering. Some will be almost entirely white, while others will be mottled and pied with black and brown, and others will be almost entirely dark-plumaged, with scarcely any white about them. Owing to this variation, the Snow-fleck has the local names of Tawny Bunting, or Pied Finch.

This interesting bird seldom takes to the southern counties, and, as it goes off northwards towards the end of January, the young naturalist must take care not to lose time in looking after it.

Also, in the northern part of England, the Ptarmigan (*Lagopus vulgaris*) affords another *example of whitened plumage*. In this bird the

feathers are even whiter than in the Snow-fleck, the wings as well as the body being white, with the exception of the shafts of the quill-feathers. The tail is black, and there is a black almond-shaped patch over the eye. The piece of bare skin just above the eyes has a peculiarly



STOAT.

beautiful effect in the winter time, showing out brilliantly scarlet in contrast with the black head and white eye-patch. The male is always whiter than the female, whose feathers are more or less tinged with pink.

Turning for a short time from the birds to the *mammals*, we may chance to find our once-

familiar Stoat, on its way to assume the well-known white clothing of the Ermine. It is very seldom that, even in the northern parts of England, the cold is severe enough to produce very much effect upon the fur ; but patches of white are often seen upon the ruddy-brown coat, and in a few instances, the Stoat has been seen in the full creamy whiteness of the Ermine.

In this month many birds flock together, and some in extraordinary multitudes. Larks, for example, congregate in such numbers, that vast quantities are killed for the market, and form no small branch of commerce. It seems an abominable shame to eat these exquisite songsters, but such is the fact, and, as long as the law of supply and demand holds good, as long as there is a call for boned larks and lark puddings, so long will the birds be slaughtered and sent to market.

Then the chaffinches are in great force during this month, associating together in large flocks, each flock always consisting of birds of the same sex. Before very long, the flocks will break up and each bird seek its mate ; but at the present time the males and females keep themselves strictly apart. The Wood-Pigeons also associate together, and very great harm they are apt to do, when they find out a field of turnips. They will fly to great distances to obtain the young and *tender leaves, which* are popularly called

“turnip-greens,” and if the birds be shot, every one of them will be found to have its crop filled with these leaves. The Starlings, too, are still in flocks, though, like the Chaffinches, they will soon break up for the purpose of seeking their mates.

In January, the songs of the birds recommence. The Blackbird and Thrush are to be heard almost at break of day, provided that the weather be tolerably mild, and the Chaffinch and the Hedge Sparrow sing their pretty songs in sheltered copses and similar places. The common Sparrow, too, resumes its lively chirp which it almost lays aside during the very cold weather, so that, although we are only in the very beginning of the year, we do not lack tokens of the coming Spring.

FEBRUARY.

THIS is a very uncertain month in the year for the Naturalist, and it is utterly impossible for him to make any calculations in either zoology or botany until the weather has fairly declared itself.

Sometimes the whole of February is marked by a severe frost, and, except in length of days, there is scarcely any perceptible change between this month and the last. Vegetation cannot show itself, the insect world is still oppressed with frost, and even the birds, though so many of them proverbially mate on St. Valentine's Day, cannot make head against the adverse influences, and are obliged to postpone their nest-building until the weather becomes more propitious.

In the February of some years, the bitter cold of winter is a thing of the past, and the face of the country has more of its April than its February aspect. As a rule, however, the frosts *which last throughout January* have given way,

and we first begin to perceive signs that Winter is nearly gone, and Spring is at hand.

Now, let us see what plants we may expect to see in flower. Under favourable conditions, there is of course the Snowdrop, with its curious white flowers edged with green, and, fortunately for our little birds, the Groundsel may be found blossoming in almost any sheltered nook. The Chickweed is also plentiful, so that those who live in the country and care for their canaries can always secure for them the delicacies of the season.

Then, as if to give a little colour, in which all these plants are deficient, there is the Purple Dead Nettle (*Lamium purpureum*), whose pretty flowers range through most shades of pink and purple, and are really much handsomer than might be supposed by those who do not look at them closely. And anywhere along the sides of roads and paths may be seen the Annual Meadow Grass (*Poa annua*). These plants comprise pretty well the whole of the February flowers.

Now for the living inhabitants of the world.

There is little to be done with insects, and the collector will find that, unless he chooses to dig for pupæ, he had better give his time to the arrangement of his cabinet; and looking over his specimens to see that the two great enemies of such cabinets, viz., grease and mites, are absent.

The former can be removed by plunging the insect bodily into benzine, and the latter, if camphor will not exclude them, will generally succumb to spirits of turpentine.

Still one or two insects may be found, among which is, of course, the Brimstone Butterfly, an insect which has the faculty of making its appearance, at all seasons of the year, provided the weather be tolerably calm and not too cold. Then, there are several of those remarkable insects called "Winter Moths," from which we will select the Spring Usher (*Hibernia leucophaea*).

All these moths are remarkable for the structure of the female, whose wings are more or less undeveloped. The present species has them so small as to be scarcely visible. Indeed, no one who was unacquainted with entomology, would recognise the creature for a moth. She may be found in this month, as well as in March, creeping on the trunk or branches of the oak, in order to find a fit place for her eggs. Her colour is brown, variegated with black dots. The male is common enough, and may be found in the same localities as the female. His colour—or rather the disposition of his colours—is extremely variable. Brown of various shades, white and black, are the only colours of this moth, but in nearly all specimens the lower wings are pale *grey-brown*, slightly spotted with little dark dots.

Then, there is the small Eggar (*Eriogaster lanestris*), an insect which is not so remarkable in the perfect as in the preliminary stages. Still, it is a pretty creature, its upper wings being warm reddish-brown, varied by a wavy white line, and having two white spots between the bar and the base of the wing. The chief point of interest in this insect lies in the cocoon spun by the caterpillar when it is about to change into the pupal state. This cocoon is small, hard, and egg-shaped, whence the name of Eggar, and mostly found on the hawthorn, though the caterpillar sometimes feeds on the elm.

The birds are now beginning to make their presence known. Should January be of a milder character than usual, the sparrows are likely to begin their brief, though rather monotonous, chirp; but in February there is little doubt that they will make themselves heard. Even in London, their merry chirp is generally to be heard in the morning, before all other sounds are drowned in the constant roar and rush of the noisy traffic.

London also sees a few rooks; but in the country, the rookeries are beginning to assume quite a lively appearance. and the air resounds with the loud cooing of the noisy birds, as they busy themselves about their resting places. Should the weather be favourable, the eggs of

the rook may be expected towards the end of the month, and anyone who dares to climb to the perilous height in which this bird places its nest, can take as many eggs as he likes, without doing the bird the least real damage. On looking at the eggs as they lie in their very artless nest, it seems really wonderful that they should be able to keep their places through the equinoctial gales of March. Sometimes they are thrown out, and so are young rooks, shortly after they are hatched, but though, after a severe gale, newly-hatched rooks are often found lying dead under their nests, it is seldom that eggs are so found.

Those who are fortunate enough to visit the raven's haunts, may be enabled to watch it as it prepares its nest, for like its congener, the rook, the raven builds in this month. The bird is rather indifferent about its domicile, so that it be only in a safe looking spot. It prefers precipitous rocks, but will, in their absence, build in ruins or in trees. This splendid bird is, however, so rarely to be seen in England, that few persons ever see a raven's nest, unless they make a pilgrimage for the purpose. Ravens retreat from buildings and cultivated grounds, and the natural result is, that there are now but few parts in England in which they maintain themselves. *They* still, however, hold their ground in our *large forests*, and in the New Forest, the raven



ROOK.

may often be seen flapping its way with leisurely but powerful flight, and on the look-out for food. As a rule, the young ravens are hatched somewhere about the beginning of June.

In February, many of the well-known bird-songs are heard. For example, the little blue



BLUE TITMOUSE.

Titmouse utters its sharp creaking note, which to its mate is doubtless as dulcet as the song of the nightingale. Towards the middle of the month, is heard the short articulate song of the Yellow Hammer, which has been variously translated. The most popular translation of its note is "A little bit of bread and no che-e-e-se," *and the song does really very much resemble*



MISSSEL-THRUSH.

these words. The bird is very liberal of its song, and will repeat it over and over again, within a few yards of the observer.

The coo of the Wild Pigeon may now be expected; and in its private haunts the startling flap of its wings may now be heard, as the step of the intruder rouses the pigeons from their coverts. Towards the end of the month, the Goldfinch begins to tune his throat, and to make preparations for his beautiful nest, one of the very prettiest bird-homes that is found in this country.

About the same time, the bright song of the Woodlark cheers the day in those places which it is pleased to frequent. Mr. Thompson, in his "Natural History of Ireland," remarks that he has heard the Woodlark sing from September to June, when the weather is fine, so that it is only out of song during the period of moulting, that very unpleasant time, which silences every bird while it lasts, and sometimes costs them their lives as well as their voices.

Towards the end of the month, the Missel-Thrushes, which have been going about in flocks during the winter, separate into pairs, and begin to look after their nests. In very mild weather, however, they pair much earlier, and have their nests finished at the beginning of March. The loud, rich, cheerful song of the bird is poured forth abundantly from the tops of the highest

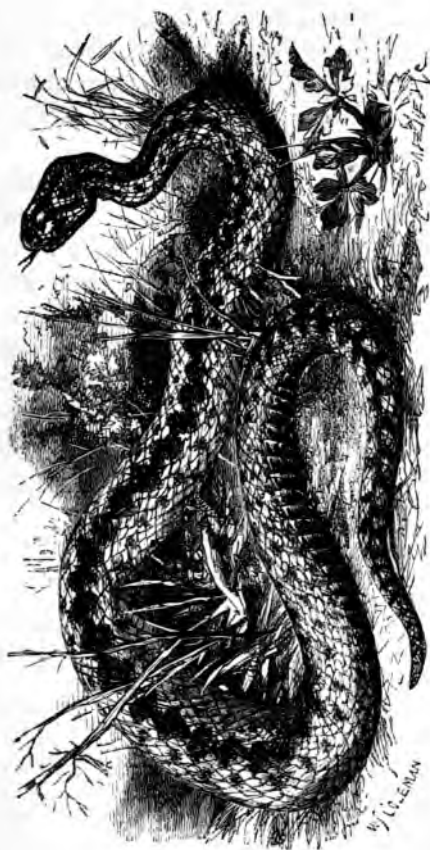


FROG.

trees, and, like the Woodlark, it will, under favourable circumstances, sing throughout the year, except in the moulting season. This year, the Missel-Thrush has been very plentiful, and in a small paddock just in front of my house, the birds have assembled in considerable flocks, filling the hawthorn hedges with their lively flutter.

Sometimes about the beginning of this month, we lose several of our winter visitors, among which may be reckoned the wild goose and the wild swan. The latter, however, generally makes a rather longer stay than the former. The wild goose, by the way, is considered to be in its very best condition just before it takes its departure. When it arrives it is thin, tough, and hard, but it fattens rapidly during its residence, and, when in its highest condition, is thought to be superior to the best tame goose.

Of other animals there is not much to be said. Frogs begin to make themselves audible as well as visible about the end of February, though they are not in full song until at least six weeks later. Last year, I had the pleasure of listening to a very melodious frog, that had taken up its residence in a garden at Canterbury. The people of the house knew the creature well, and were quite proud of their "Dutch Nightingale." One such songster is, however, quite enough for any-
one.



VIPER.

W. G. LEMMA

On warm days, the Viper crawls from its winter quarters, and loves to bask in the sun, mostly coiled in a little hillock. I have seen many of them in the New Forest in such situations, generally so very comfortable that they objected to moving, and would only glide off slowly when actually disturbed.

I may observe that the viper is very much less dangerous than is supposed. I have walked repeatedly through heather ground, where the vipers absolutely swarmed, but never saw one that even assumed an offensive attitude. At every few steps a viper might be seen gliding away, but they never thought of attacking. Indeed, I never but once saw a viper strike, and that was because its back had been broken by the blow of a stick, so that it could not get away.

MARCH.

EXCEPT home-work, and the never-failing resource abroad, pupa-digging, the young Naturalist can do but little in this month. However, we will just run over some of the plants and animals which may be expected to be found in the course of March.

As to the plants that are in blossom, they are many more in number than the insects which show themselves, so that the botanist has in this month a decided advantage over the entomologist. The well-known Crocuses, for example, show their beautiful yellow or purple flowers, and in the woods and thickets the golden yellow Daffodils may be seen in blossom. Violets are, or ought to be, in high perfection in March, while the yellow flowers of the Dandelion, and the white, starry, pink-edged Daisies appear in profusion.

Then in woods and on dry banks is that curious plant, the Barren Strawberry (*Potentilla fragariastum*), which has flowers and leaves almost exactly like those of the real strawberry,

but the fruit is unfortunately uneatable, being small, dry, and hairy. This plant flowers well into April. In this month we first see the pretty little pale blue flower of the Small Henbit



VIOLET.

(*Veronica hederifolia*), sometimes called the Ivy-leaved Chickweed Speedwell, in consequence of the low, creeping stem like that of the chickweed, and the broad, flat, five-lobed leaves, resembling those of the ivy.

In the west of England the Two-leaved Squill (*Scilla bifolia*) may be found in blossom, though in other parts of the island its blue flowers are very seldom to be seen. The shining, golden yellow flowers of the common Lesser Celandine are now to be seen in shady places and meadows, and those who know where to look for it may find the green, purple-tinged blossoms of the *Stinking Hellebore* (*Helleborus fœtidus*). It is

happily a rare plant, growing sparingly in thickets and waste ground.

Towards the middle or end of this month the Hairy Cardamine (*Cardamine hirsuta*) blossoms, but is perhaps in fuller blossom in April than in March. The same may be said of the common Colt's-foot (*Tussilago farfara*), which may be found in marshy places or in a clay soil near rivers and ditches. The name *Tussilago* is formed from the Latin word *tussis*, a cough, and was given to the plant because the bitter mucilaginous leaves were formerly thought to furnish a medicine useful in bad, obstinate coughs. In somewhat similar localities may be found the really splendid plant, the Common Butter-bur (*Petasites vulgaris*), a plant that is our best representative of the luxuriant vegetation of the tropics.

The flowers, however, present a curious contrast to the leaves. In the first place, they appear before the leaves are developed; and in the next, the flowers seem totally out of proportion to the foliage. Its small, pale lilac flowers are set in close panicle, and the whole bunch, in which a great number of blossoms are included, is barely three inches in height. Yet, the heart-shaped leaves, clad thickly with down on the under surface, are often two feet in diameter, and, under favourable circumstances, have been known to attain the enormous width of a yard.

The inconspicuous Wood Spurge (*Euphorbia amygdaloides*) may be found in flower, growing in and near woods and coppices, the yellowish tinge of the petals scarcely distinguishing them from the green of the surrounding leaves. This plant is widely spread and very common, but there is a shrub-like *Euphorbia* called the Red Shrubby Spurge (*Euphorbia characias*), which runs to three feet in height. It has greenish flowers with purple glands, and is found in bushy places. Botanists, however, doubt greatly whether this plant ought to rank among the indigenous vegetation of England, and think that it must be a colonist which has found the soil suitable.

Passing by the plants, we come to the trees, the flowers of which are seldom beautiful, but to the botanist are always interesting. The waving Poplars, for example, are in blossom, including the spire-like Lombardy Poplar, and the Aspen, with its ever trembling leaves. The "catkins" of these Poplars are very dull objects to the unaided eye, but when placed under the microscope, they develop a wondrous beauty, both of form and colour. Our space, however, is far too limited for any detailed description, as the whole of this book would not afford sufficient space for even a superficial description of the wonders contained in a Poplar catkin.

Then, the waving Willows are in blossom, *each species having its peculiar mode of flower-*

ing, and, as in the Poplar, developing a catkin



WILLOW.

which is dull enough to the ordinary eye, but a



ELM.

treasure of wondrous beauty when placed under
the revealing lens of the microscope. The Elm,

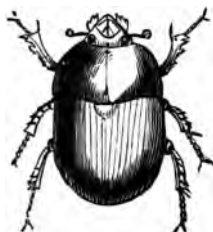
too, displays in this month its little tufts of purple flowerets, though they are generally unseen except by botanists, because the untutored eye rarely suspects that flowers can exist before the leaves have been developed. The flat, oblong, wing-like fruits of the Elm are very familiar to us after they have been shaken from their foot-stalks by a breeze, and come fluttering and spinning down, almost as if they were living beings.

Passing from the vegetable world we come to the animal kingdom, and begin with the INSECTS that appear in March. With the exception of one or two that have a habit of showing themselves in every month of the year, there are very, very few that make their appearance in March.

Should the weather be fine and warm, the ants begin to manifest themselves, and the Wood Ant, in particular, usually becomes active. We shall have much to say respecting this insect in connection with a future month, and therefore will only make a casual mention of it in the present place. The Dor Beetles may now be heard as well as seen, whirling on heavy wing, and looking out for spots where to lay their eggs. A few other beetles, such as Ground Beetles and Sunshiners, come out on sunny days, and on the surface of any sheltered pools the Whirlwig Beetles pursue their restless course. Gnats, too, *begin to make their appearance*, and may be

seen in perfect clouds under the shelter of trees, the whole gnat cloud drifting to and fro with one accord, just like the vast starling flocks that are so familiar to us in the latter part of the year.

A few other flies come out in this month, and, if the reader wishes to see the hairy Humble-bee flies, or Bombylidæ, now is his time, while



DOR BEETLE.

the Primroses and Cowslips are yet in flower. I have always found that open spots in woods are the best places for seeing the Humble-bee flies. Their flight is so swift that no one can tell whence they come or where they go, but suddenly the insect appears, hovering near the flowers as if to select one to its taste, and then, inserting its long, slender tongue, thrusts it into the heart of the flower, and thus sucks the sweet juice while it still remains on the wing.

No Butterflies are to be seen in this month, *except that a hibernating Brimstone, or Tortoise-*

shell Butterfly, sometimes leaves its shelter, and comes into the open air on a warm, still day. I find that, if the weather should change, the latter of these Butterflies does not necessarily perish, as some entomologists have thought, but is capable of going back to its place of shelter, and waiting for a more propitious season.

Although the Butterflies themselves are not yet visible, their larvæ may be found at this time of the year, and should be sought by the practical entomologist. Towards the end of March, the larva of the Speckled Wood Butter-



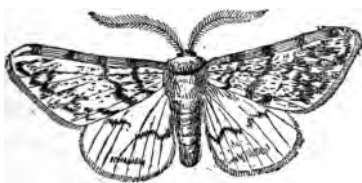
SPECKLED WOOD BUTTERFLY.

fly (*Pyrarga egeria*) is full-fed, and in just the best condition for the breeding-cage. It may be found among grass, stretched straight along the blades, and, on account of its dark brown colour, easily escaping the eyes of those who do not know exactly where to look for it.

In similar situations may be found the caterpillar of the Grayling Butterfly (*Satyrus semele*).

Its colour is green, with a darkish streak along the back, and a paler stripe on either side. The chrysalis is also green, and is suspended by the tail.

Moths are much more common than Butterflies. That rather pretty, but sombre-coloured Moth, the Pale Brindled Beauty (*Phigalia pilo-*



Male.



Female.

PALE BRINDLED BEAUTY.

saria), may be seen towards the north of England. It is one of that curious group whose females do not possess wings. Its near relation,



OAK BEAUTY.

the somewhat scarce Oak Beauty (*Amphidasis prodromaria*), also comes out in this month.

Then in March appears nearly the whole of those numerous and variable Moths belonging to the genus *Tæniocampa*, and called by the popular names of Drabs and Quakers. They may generally be found about oaks.

Passing to the Vertebrates, we shall find in the month of March those huge masses of black-speckled jelly, which are so familiar under the name of frog's-spawn. Should the month be a warm one, the little Tadpoles will be hatched towards its end, and will line the edges of the ponds and ditches with their black, big-headed bodies.

The common Ringed Snake, which is generally later to come than the Viper, makes its appearance about the middle of the month, and may be seen gliding about in search of the frogs, on which it feeds; one frog, however, serving it for a long time.

Birds now begin to assert themselves. Towards the middle of the month the harsh cry of the Wryneck is heard, as the bird calls to its mate. So is the long-drawn, melancholy whistle of the Greenfinch, and the simple, but lively chirp of the Chaffinch. This last bird begins nest-making in this month; but the structure is so elaborate and occupies so much time, that the Chaffinch cannot finish its nest and begin to lay until many birds who began after it are *sitting on their eggs*. The Missel-thrush, for *example*, has generally completed its nest and

begun to lay in this month, and the Blackbird



WRYNECK.

and Thrush have mostly done the same by the



CHAFFINCH.

end of March. The simple nest of the Wood-lark is nearly finished in March, and the eggs

laid. The Crow, a later bird than the Rook, begins its nest-building in March, but does it very leisurely, so that it takes a considerable time in completing its task.

A great and manifest change now takes place in some of the migratory birds. For example, the Wheatear makes its appearance in March,



WHEATEAR.

and so do the House-martin and the Sand-martin, two of the earliest of the small tribe. The Swallow itself does not visit us until the end of March, and, should the weather be unfavourable, waits for April. Then the Redwings and Fieldfare leave us, but return again in autumn.

The Snipe plays rather a curious part, some *going off northward*, and some remaining to

breed. The nest of the Snipe is not easily found, and, indeed, can scarcely be called a nest, being little more than a small hollow in the ground, in which a few dry plants are carelessly arranged. There are four eggs, very similar in colour, but generally grey-green, blotched irregularly with brown. They are much larger at




SNIPE.

one end than at the other, and are arranged in the form of a cross, the four small ends being placed towards the centre of the nest. Any one who collects birds' eggs is always glad when he finds a Snipe's nest, for, although the eggs are much more plentiful than is generally known, they are so difficult to find, that they rank among the choicest specimens of a collector.

APRIL.

AT last nature begins to assert her life, and the vegetable and animal worlds spring into activity. The hedgerows are clothed with that sweet soft green which is peculiar to it at this time of year, the trees are getting well into leaf, insects are humming and darting about in all directions, and the song of birds resounds on every side. Following our custom, we will begin with the vegetable kingdom. Most of the plants which were noticed in last month's "Calendar" still remain in bloom, and need no further mention.

There is the common Mercury (*Mercurialis perennis*), with its curious little green flowers and single leaves, growing in woods and thickets. Several of the Speedwells are also in flower. There is, for example, the Germander Chickweed (*Veronica agrestis*), which derives its popular name from the slender, drooping stem, which resembles that of the common chickweed. This is common enough, but there are two rarer Speedwells which also flower in this month. The first is the Vernal Speedwell (*Veronica*



verna), which lives in dry fields, and the second is the Trifid Speedwell (*Veronica triphyllos*), so called from the shape of the upper leaves, which are deeply cut so as to form three long, finger-like segments.

In dry woods may also be found the Wood Crowfoot (*Ranunculus auricomus*), sometimes called Goldilocks, from its bright golden flower. It belongs to the same genus as the common Buttercup, which, however, does not blossom until summer has fairly set in.

Two of the prettiest and most conspicuous of the Lily family are now to be found in blossom. One is the Wild Tulip (*Tulipa sylvestris*), which may be found in chalky soils, and which is, therefore, necessarily a local plant. The yellow flower of this pretty plant droops rather loosely, and the stem has not the stiffness which tulip fanciers require in their cultivated plants. The second is the Fritillary, sometimes called the Snake Head Lily, from the shape of the flower, which, with its slender, drooping stem, really has some resemblance to the outline of a snake's head and neck, especially just before it opens. This plant can only flourish in wet places, and therefore the progress of drainage has quite extirpated it from many spots where it used to be plentiful. The flower is brownish purple, covered with a number of brown spots, scattered irregularly over the surface.

• In this month we also find in bloom the Spring Vetch (*Vicia lathyroides*), its pretty purple or white flowers upheld by the short tendrils, as the plant trails its way among the sturdier vegetation of the field or the road-side. Our common Vetch, with which cattle are so abundantly fed, belongs to the same genus, but is supposed to be a foreigner, which has been naturalized in this land.

Several of the Orchis family are now in blossom. These are wonderful plants, which even in this climate run into the most extraordinary forms of flower, but which, under the burning sun of the tropics, develop their varieties of form with a luxuriance that is almost beyond credibility. One of these is the Early Orchis (*Orchis mascula*), which sometimes appears in April, though it is generally in full blossom about the middle of May. It lives in pasture lands, and, although it is but a small plant, averaging some six inches in height, its red-purple flowers, with white lips, render it conspicuous enough to every one who knows how to use his eyes. Sometimes the flower is entirely white, like the lip. Another is the spider Orchis (*Orphrys aranifera*), so called on account of the manner in which the flower of this plant, obeying the general imitative rule of Orchids, resembles a large, fat-bodied spider so closely that the likeness is almost startling.

The delicate Anemones are among our April flowers. There is the familiar Wood Anemone, sometimes called the Wind-flower, which is found, as its popular name denotes, in woods and copses, and whose pretty flowers, white above and purplish beneath, are too well known to need any description. The Pasque Flower (*Anemone pulsatilla*) is by some botanists set down as one of our April flowers, but, in point of fact, it seldom blossoms until May, unless the weather has been exceptionally warm and tranquil.

There are two more Anemones which certainly bloom in April, but which are much suspected of being importations. Botanists have an abominable habit of importing seeds from other countries, sowing them where they are likely to grow, and saying nothing about their freak. In this way many foreign plants have been foisted on the public as of genuine British origin, and such is probably the character of these two Anemones. One is the Blue Anemone (*Anemone apennina*), remarkable for its blue petals, something like those of the corn-flower; and the other is the Yellow Anemone (*Anemone ranunculoides*), whose flowers are bright, golden yellow, like those of the buttercup, a peculiarity which is commemorated in its specific name.

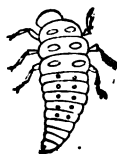
Besides the familiar, sweet-scented Violet, there are other Violets which blossom in this month. There is, for example, the scentless Dog

Violet (*Viola canina*), which is cunningly mixed with the genuine Violet by the itinerant flower-seller. Then, in chalky soils, the Hairy Violet (*Viola hirta*) is found. Like the sweet Violet, it has no stem, but it can at once be distinguished by the rough leaves and the paler hue of its petals. There is, also, the Marsh Violet (*Viola palustris*), which is only to be found in wet and especially in boggy ground, and has a pale lilac flower. There are yet many other British plants which flower at this season, but our space is very limited, and we must proceed to the insects.

In April, the Beetles begin to make their presence known. The Death-watches, who inhabit old timber, now begin to seek their mates, and



SEVEN-SPOT LADYBIRD.



DO. LARVA.

do so by knocking their heads against the sides of their wooden burrows—a sound which, though pleasant enough to themselves, has carried terror and consternation into thousands of families who do not understand the habits of insects. At the *beginning* of the month, various Ladybirds make

their appearance, having emerged from the sheltered crannies in which they have passed the cold wintry months.

It is not, however, until the middle of April that the insect tribes really begin to be conspicuous, but somewhere between the twentieth and thirtieth of April, they generally come out in such abundance that they almost seem to have been let out of some prison-house.

The Red Ant now issues from the subterranean habitation, in which it has been snugly lying throughout the winter, perfectly defended, though only by a few inches of earth, from the bitterest cold. It is really wonderful that an effectual protection is afforded by earth, as indeed is practically known to gardeners, who save their tender plants from frost merely by an inch or two of dry soil or ashes.

About the same time, the fierce *Asilus* flies make their appearance, and the irritating hum of the Blue-Bottle is heard oftener than it is welcome. In the places where the Mole Cricket still survives, its loud, rasping note is to be heard, and, should the weather be warm and still, bees are hard at work among the yellow furze-blossoms.

With the exception of those butterflies which have already been mentioned, we seldom see any of these pretty insects, which are more *specially* lovers of the summer-time. Still, we

may find their larvæ, and take them home for the sake of watching their habits. There is, for example, the larva of the well-known Meadow-Brown (*Satyrus* — or *Ephinephele* — *Janira*), which may be found clinging to the stems of grass, just above the surface of the ground, and pressing its body so firmly along the stem that it can with difficulty be distinguished.

In similar positions will be found, as in last month, the caterpillar of the Speckled Wood (*Pyrarga Egeria*). It should be looked for somewhere about the beginning of the month, as it is then full-fed, changing into the pupa state before April has been many days old. In warm weather the development of the insect is very rapid, for the butterfly itself often emerges from the chrysalis before the middle of the month.

As to the Moths, a goodly array of them present themselves, but as those insects mostly appear only after dusk, they escape observation in spite of their numbers. We can only notice a very few of these night-fliers. Towards the beginning of the month, we may look for that exceedingly handsome insect, the Emperor Moth (*Saturnia Carpinî*), which is remarkable as being equally interesting in its three stages. The caterpillar with its bright green, deeply-ringed, gold-tufted body, is at once a most beautiful creature, and quite unlike any other English

larva. Then, in its pupa state, the exceedingly ingenious cocoon is always interesting, showing that eel-weirs and mouse-traps are only clumsy imitations of an insect's workmanship ;



EMPEROR MOTH, CATERPILLAR, AND COCOON.

while in its perfect condition, its beautifully variegated wings, with their bold eye-like spots, and their rich, soft colours, always excite admiration.

The beautiful larva may be found on willows, blackthorn, and heath ; the last-mentioned plant being that in which I have almost invariably taken it.

The very pretty, very common, and very

variable Water Carpet Moth (*Cidaria suffumata*), may now be seen. It is not a striking insect to the general spectator, but to the entomologist, or even to the artist whose eyes are trained to understand gradations of colour, there is something very fascinating in the soft gradations of brown, white, grey, and black, which are the only hues of this insect.

Towards the end of the month, when April is verging into May, a great number of moths come out, of which our space will only allow us to mention one, the Cockscomb Prominent (*Notodonta camelina*.) This is rather a curious insect, as it seems to be quite indifferent as to the time of its appearance, and may be found in the caterpillar state almost as long as the oak, on which it feeds, remains in leaf. It appears almost simultaneously with the first leaves, and remains as long as a green leaf can be found.

In April, the birds are busy with their nests, and chief among them must we note the Nightingale, whose marvellous song may be heard throughout the whole of the twenty-four hours, except an hour or so at dawn, and another towards dusk. Pity that the song-time of the Nightingale is so short, for there is nothing to compare with it, and it really seems to compress *into a few weeks* the melody which ought to last *for a year*. However, if we do not have

quantity, we have quality, and that of the highest order.



NIGHTINGALE.

The Jackdaw now lays its eggs in abundance in any old building that it can find, ruined



STARLING.

castles and church towers being its favoured spots. *The Starling* bears it company both in time and

place, and it is seldom the case that a spot which is tenanted by Jackdaws, is not equally haunted by Starlings; the pale-blue shining eggs of the latter bird being laid in almost any sort of crevice, while the greenish brown-mottled eggs of the former seem to require quite a large platform of sticks and rubbish for the safety of the eggs. In this month, we may expect the welcome cry of the Cuckoo, carrying out the old



CUCKOO.

adage, that, "In April, come he will;" and before the Cuckoo, comes the Wryneck, with his curious, harsh, loud cry, that can be heard quite *as far as the fuller note of the Cuckoo.*

In the meadows, the rough, jarring note of the Corncrake is heard, as the bird threads its way through the grass; and, altogether, towards the end of this month, the birds are in full song and full activity.



CORNCRAKE.



MAY.

IN this month we may look for the blossoming of several of our fruit and forest trees. Several of the Pear tribe, for example, are in flower, among which the most prominent is perhaps the common Crab-apple (*Pyrus malus*), which is believed to be the source of all our multitudinous varieties of the apple tribe. There is also the Wild Pear (*Pyrus communis*), also the origin of the different pears. There is another pear-tree which is also in blossom in May, and which is well known to every one, though few but botanists recognize it as belonging to the pear tribe. This is the Mountain Ash or Rowan (*Pyrus aucuparia*), whose tufts of white flowers are as conspicuous in May as are its bunches of scarlet berries throughout the autumn.

In May are seen the pretty catkins of the Hornbeam (*Carpinus betulus*), long, drooping, brownish green, but yet singularly graceful from their feather-like droop. Two of our pines also come in blossom, namely, the well-known Scots

Fir or Pine (*Pinus sylvestris*) and the Juniper (*Juniperus communis*), whose berries are so largely used in giving its peculiar flavour to gin.



HORNBEAM.

The Beech still keeps its flowers, and the long, drooping, yellow flowers of the Spanish Chestnut (*Castanea vulgaris*) abound, filling the air with their powerful, though not agreeable scent. Both the Sycamores are also in flower in this month, namely, the true Sycamore (*Acer pseudoplatanus*) and the Maple (*Acer campestre*). This latter tree is generally found in hedges, and is thus so cropped, and bent, and distorted, that it has no chance of attaining its full dimensions. It may at once be distinguished by the curiously-grooved bark, which looks, especially in young branches, as if it had been pricked up in wrinkles while soft, and then left to harden. A small portion of a young branch is given in

the illustration, so as to show this peculiarity of the bark.

According to popular ideas, the Hawthorn ought to be in blossom on the first of May, though the weather must be very favourable,



MAPLE.

and the place southerly to enable it to show its flowers before the second week of the month. The Spindle Tree (*Euonymus Europæus*) is also in full blossom in May, its little greenish-white flowers giving but small promise of the singularly-beautiful fruit, which is so great an ornament to the tree in the end of autumn, when the leaves have fallen from the branches.

As to flowers, so many of them blossom in May, that we can only make a small selection of them. The Primrose still holds its place, and so do some of the Violets, while the pretty, *though not showy* Starworts (*Stellariæ*), includ-

ing the famillar Chickweed, show their white, star-like flowers in all directions.



SPINDLE TREE.

Various Crane-bills are now in flower, though several of them wait until the summer is fully come before they put forth their flowers. Among them may be mentioned the Herb Robert (*Geranium Robertianum*), which retains its red, white-streaked flowers until the autumn, and may be found in almost every hedge-row. Another plentiful species of wild *Geranium* is the Soft Crane's-bill (*Geranium molle*), which

may be known by its pale purple, deeply-notched flowers; and round, downy leaves. This pretty little plant lives on dry pasture lands, seldom exceeding six inches in height, and being usually from three to four inches high. Another species, the Jagged Crane's-bill (*Geranium dissectum*), lives in similar localities, and may be at once distinguished by its curiously-shaped leaves, which are cut, as it were, into three finger-like lobes. It is, perhaps, scarcely necessary to remark that the name of Crane's-bill is given to the wild Geraniums on account of the long, pointed seed-vessel.

Then there is the common Mallow (*Malva sylvestris*), with its pink flowers, which may be found in bloom from May to August. This is the plant which is always the delight of children on account of its prettily-shaped seed-vessels, which are called "cheeses" by them. The other mallows are not in blossom until next month.

With two more wild flowers we must conclude our selection of the May blossoms.

One is the Pheasant's-eye (*Narcissus Poeticus*), which derives its popular name from the scarlet ring round the edge of the nectary, which bears some analogy to the scarlet patch which surrounds the eye of the pheasant. This ring is very conspicuous within the centre of its white, *six-petalled*, star-shaped flower. This plant is

found on heaths and pasture land, and is easy to be seen, as it rises to an average height of a foot, and its starry flowers are large enough to catch the eye at a considerable distance.

The second plant belongs to the same genus as the former, and is known as the Pale Narcissus, or Primrose Peerless (*Narcissus biflorus*). There is no difficulty in distinguishing this plant from its congener, as, in the first place, the petals are very pale yellow instead of white, the nectary is of a deeper yellow, and the flowers occur in pairs, whereas those of the Pheasant's-eye are single. Sandy places are the best localities for this plant, which loves a dry and loose soil.

First and foremost among our May insects comes the splendid Swallow-tail Butterfly (*Papilio machaon*), the only British butterfly that reminds us of the magnificent insects of tropical countries. This butterfly is now a rare as well as a splendid one, and can only be found in those few marsh lands which the progress of agriculture has suffered to remain undrained.

The larva feeds chiefly on the common Hog's Fennel (*Peucedanum palustre*), sometimes called Milk Parsley, but has been known to feed on many other plants, among which is the leaf of the common carrot. It is one of the prettiest of our British caterpillars, rich, soft green banded with *velvety black*, and adorned with six orange spots

on almost every ring of the body. The strangest part of the larva is the peculiar forked organ which is situated on the second ring of the body, just behind the head, and which gives out



SWALLOW-TAIL BUTTERFLY.

a strong odour of fennel. This organ can be greatly lengthened at will, or can be wholly withdrawn within the body in a manner which Mr. Spence likens to the horns of a snail.

When the caterpillar is full fed it ascends the stem of a plant, changes into a pupa, fastening itself to the plant by its tail, and by a strong *silken belt* which passes round its body. The

chrysalis is a very pretty one, the principal colour, like that of the larva, being green,



CATERPILLAR OF SWALLOW-TAIL BUTTERFLY.

though of a paler hue and with a dash of yellow.



CHRYSALIS OF SWALLOW-TAIL BUTTERFLY.

One of the commonest, and not the least



PEARL-BORDERED FRITILLARY.

pretty, of the Fritillary butterflies is seen in *May*. This is the pearl-bordered Fritillary

(*Argynnis Euphrosyne*). This insect derives its popular name from the beautiful silver spots of the under surface, some of which form a pearl-like edging to the lower pair of wings. Towards the end of May it may be taken in almost any part of England, and, as the larva feeds on the common scentless dog-violet, the perfect insect may generally be seen in those spots where the dog-violets are most plentiful.

Besides this insect, another butterfly, the Greasy Fritillary (*Melitæa Artemis*) now appears on the wing, and may be seen in those localities which it has been pleased to frequent. It is rather a local insect, but tolerably plentiful in those places which it finds suitable to its habits. I took my own specimens in Bagley Wood, near Oxford, a spot that was once upon a time a very treasure house of entomology.

The popular name of this butterfly has been given to it on account of the under surface of the wings, which look very much as if they had been rubbed with an oily finger. The colours of the upper surface are those peculiar browns, black, and yellow, which are characteristic of the Fritillaries in general.

Our limited space will only allow one more butterfly to be mentioned — the delicately beautiful Orange-tip (*Anthocharis Cardamines*). I have remarked that novices in entomology are *always* greatly taken with this butterfly when

its beauties are for the first time explained to them. Those who have been long familiar with the insect have generally forgotten the impression which it made upon them, but there are very few who can for the first time see the beautiful green-grey mottlings of the under



ORANGE TIP.

surface of the lower wings without being struck with the contrast presented to their plain white upper surface. It need scarcely be mentioned that the bright orange patch on the tip of the upper wings is peculiar to the male, though the mottlings of the under surface are common to both sexes.

Passing to the birds of May, we may in this month expect the Swift, a bird whose marvellous powers of flight have always exercised a sort of fascination over me. I can scarcely take my eyes off a Swift on the wing, so full of easy grace and power are its evolutions. Flying *looks so easy* when one sees a Swift do it.

If the month be a fine and warm one, as it generally is, the Swift lays its eggs during the last few days of May, and the female begins to sit. The simple nest is generally made under the eaves of outhouses, especially if they be thatched, and in it are the white long eggs which seem almost to typify the long-winged bird which is to be developed from them.

Others of the Swallow tribe begin their house-keeping in this month. The Swallow itself, for example, does so, and the familiar House Martin is hard at work on its mud-built nest. This latter bird, by the way, is extremely variable in the time of its egg-laying, the weather often making a difference of a fortnight or more. The reason is that the nest is made, as everyone knows, of mud. Now, in fine, dry, warm weather, especially if there be a brisk current of air, the mud dries almost as soon as it is deposited, and in consequence the nest is rapidly finished. But in wet, still, drizzly weather, the mud cannot dry, and in consequence the bird cannot complete its nest. The clay or mud, when once dried, resists wet admirably, but when first applied to the nest, seems to absorb any moisture in the atmosphere, and in case of heavy rains is sometimes washed away altogether.

Somewhere about the middle or end of May, according to the state of the weather, the

Blackcap (*Sylvia atricapilla*) arrives. In some exceptionally warm seasons indeed, it even makes its appearance in April, and begins to exercise its exquisite voice. This bird has been called the Mock Nightingale, partly because its natural song is scarcely inferior to that of the Nightingale, and partly because it has a habit of mocking the notes of other birds.



THE BLACKCAP.

It is not nearly so bold a bird as the Nightingale, for, whereas the latter songster will perch on a branch in full sight, and sing almost within arm's length of houses, the former prefers to hide itself in some thicket, and there concealed to utter its song. This bird sings for a long time, its notes being sometimes heard from April to August.

As to the birds which lay in this month, they are so numerous that I cannot even mention all their names. Taking some of them as they occur, without any pretence of arrangement, we shall find that the Sparrow Hawk's eggs may be taken by those who know where to look for them, and that the Barn Owl also begins to lay its curious, white, round, rough-shelled eggs.

Then the exquisitely beautiful nest of the Goldfinch contains its not less beautiful eggs, and the same may be said of the Bullfinch. The Nightingale also lays its brown eggs in May, and also in May its wondrous song ceases. Towards the beginning of May, both the Grey and Yellow Wagtails lay their pretty mottled eggs in the deeply hidden recesses which they love.

In May the Kingfisher deposits its multitudinous pinky-white eggs in the strange habitation which it chooses—viz., a deserted water-rat's burrow, widened at the end into a chamber.

And the last bird that we can mention, the curious Nightjar, comes to us some time in May, and, towards the end of the month, it deposits its white, streaked, and mottled eggs in the simplest of all nests—*i.e.*, on one or two dead leaves in a casual hollow in the ground.

JUNE.

IN this beautiful month the naturalist almost suffers under an *embarras de richesse*, for both the vegetable and animal kingdoms are in their fullest vigour within a week on either side of Midsummer-day.

Beginning with the trees and shrubs, we find several of them in blossom. Several of the wild Roses, for example, among which is the soft-leaved Rose (*Rosa mollis*), which may be known by its deep red flowers, and the soft, downy masses of its leaflets. This pretty shrub prefers lofty spots, and in mountainous districts is quite common. There are two varieties of this rose, which have been by some botanists ranked as distinct species; they are the Downy Dog-rose (*Rosa tomentosa*), which chiefly differs from the preceding shrub by the paler hue of its petals, and the arched form of its root and shoots, whereas the shoots of the soft-leaved Rose are straight, or nearly so. The second variety was named *Rosa scabriuscula*, and was distinguished by its leaflets, which are smooth and not downy.

In this month the Sweet-brier, or Eglantine (*Rosa rubiginosa*), is in flower, and so is the common Dog-rose (*Rosa canina*), which is so plentiful in almost every hedgerow.

Several of the bramble tribe are now in blossom, such as the Dewberry (*Rubus cæsius*), a shrub which very much resembles the common bramble, but is more trailing, and its fruit has much larger and fewer grains than those of the ordinary blackberry. The little Stone-bramble (*Rubus saxatilis*), which rarely attains one foot in height, is also in flower in this month. At first sight it looks more like an herb than a shrub, and its flowers are white tinged with green, quite unlike the pretty pink-tinted blossoms possessed by most of the brambles.

Those who are able in this month to ramble over moorlands, will find the Cloudberry (*Rubus*



CLOUDBERRY.

chamaemorus) in flower. It is but a little plant, some seven or eight inches high, but its fruit, which is orange in colour, can be eaten by those

who like such wild berries. In mountain woods the wild Raspberry (*Rubus idæus*) is to be seen, and can be detected even at a distance, when there is a tolerable breeze, by the white under-surface of the leaves, this effect being produced by a thick soft down with which they are clothed. Like that of the wild strawberry, the fruit possesses a flavour even superior to that of the cultivated plant, though it is very much smaller in size.

Towards Midsummer may be seen the white clustering blossoms of the Elder (*Sambucus nigra*) with their peculiar and rather powerful perfume, prognosticating the crop of black purple berries, which in the autumn are largely used in making elder wine.

As for June flowers, they are so numerous that it is not easy to make a selection from them. Most of the Bedstraws are now in blossom, and remain in flower for some time, say three months. The best known of these plants is perhaps the common Goose-grass (*Galium aparine*), which climbs so abundantly among our hedges, trailing its long and prickly stems among the foliage, and supplying, at a later season of the year, those little round, green, prickly fruits which cling to the garments of those who happen to brush by them.

Two of the Pimpernels are now in flower, namely, the common Scarlet Pimpernel (*Ana-*

gallis arvensis) and the Blue Pimpernel (*Anagallis cærulea*), which has its flowers blue, but with a scarlet centre. This plant can however be scarcely reckoned a separate species, as it is, in all probability, a mere variety of the more common Scarlet Pimpernel. There is another species of Pimpernel, namely, the Bog Pimpernel (*Anagallis tenella*), which, however, does not come into blossom until next month. As its popular name imports, it is to be found in wet and boggy places, where it is tolerably common. It much resembles the Scarlet Pimpernel, but that the flower is pink and the leaves are round instead of oval.

In rocky places may be seen the Foxglove (*Digitalis purpurea*), one of the most splendid of our wild flowers. As it is of sociable habits, its beauty is greatly increased, and there is something almost tropical in the aspect of a group of well-grown Foxgloves, twenty or thirty in number, running up four or five feet high, and thickly hung with their bell-shaped, crimson speckled flowers. Another fine plant, which I fear is not indigenous, is the common Snapdragon (*Antirrhinum majus*), which grows so abundantly on the top of old walls.

There is a very pretty plant allied to the preceding, called the Ivy-leaved Snapdragon (*Linaria cymbalaria*). It has a very slender, creeping stem, which trails in abundant festoons

over old walls. It is plentiful at Oxford, where the ancient walls of the original fortifications afford it a very suitable resting-place. It is said, but with what truth I know not, that the celebrated "Ivy" ale of Oxford owes its peculiar flavour to the leaves of the Ivy-leaved Snapdragon.

In this month the lovely White Water-Lily (*Nymphæa alba*) is seen in blossom, its beautiful white-petaled, yellow-centred flowers floating on the surface of the water, and contrasting admirably with the broad, smooth, green leaves. Its relatives, the Yellow Water Lilies, do not come into blossom until next month.

Several of the wild Poppies are now in flower, the best known of which is the common Corn Poppy (*Papaver Rhæas*), which is so plentiful in some corn-fields, so pleasing to the eye of the artist, and so detestable to that of the farmer. The Prickly-headed Poppy (*Papaver Argemone*) also blossoms in June. It may be distinguished by the peculiarity from which it derives its popular name, viz., the prickly surface of the capsule. Its petals, too, are sooner in perfection than those of the Corn Poppy, and when the flower is in full blossom, they are widely separated from each other instead of overlapping, like that of the Corn Poppy.

Then, on the coasts we may find the common Horned Poppy (*Glaucium luteum*), so called

because the capsule is very narrow and long, projecting from the middle of the bright yellow flower like a horn. There is another of these plants with scarlet instead of yellow petals. This is the Scarlet-Haired Poppy (*Glaucium Phœnicium*), which is also found on sandy shores. The leaves of this plant are very deeply cut, and have a sort of ragged look about them.

The Ferns are now unrolling their wonderful leaves, and in good condition for removal by those who are fond of transplanting them. We can only offer one example of the Ferns, namely,



HART'S-TONGUE FERN.

the well-known Hart's-tongue (*Scolopendrium vulgare*), whose smooth shining green leaves are

in requisition for the adornment of artificial rockeries.

It is with the greatest reluctance that I quit the flowers, but our space is so limited, that there is no help for it, and we must get to our insects, which are as numerous in their way as are the flowers.



HIGH-BROWN FRITILLARY.

Beginning with the Butterflies, we may in *June* find the beautiful High-brown Fritillary

(*Argynnis Adippe*) flying about in wooded places. One of the commonest Fritillaries, it is one of the handsomest, its rich mottled upper surface and silver-spotted under surface having a most singular contrast as it passes through the air with its peculiar flight.

Should the weather be favourable, the pretty Ringlet Butterfly (*Epinephele Hyperanthus*) may



RINGLET.

be found on the wing towards the end of the month. It is very seldom that in a butterfly the under side is more beautifully marked than the upper. This, however, is the case with the

Ringlet, the upper surface of which is plain black-brown, while the under surface is yellowish brown, marked with sixteen nearly circular spots, three on each of the fore-wings and five on each of the hind-wings. Each of the spots is black, and has a very small white speck in the middle, and is surrounded with a ring of greyish white.

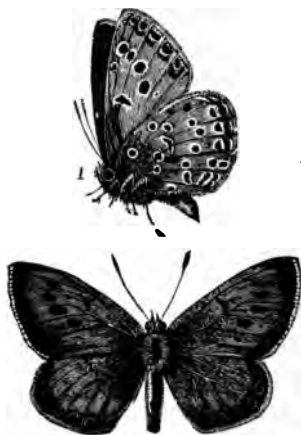
Another Butterfly belonging to the same genus is now to be found : this is the common Meadow-Brown (*Epinephele Janira*) with its single-eyed spot near the tip of the fore-wings. Like the preceding insect, this is an exceedingly variable butterfly, and there is scarcely any good collection which does not possess several well-marked varieties of it. My own collection is by no means a large one, and yet there are several varieties of the Meadow-Brown and the Ringlet.

The Grayling (*Satyrus Semele*) is now on the wing, and is very common on open spaces, flying very low, and only fluttering for short distances, instead of passing its time chiefly on the wing as many butterflies do.

During June, the beautiful little Blue Butterflies are out in great force. One of them is the Chalk Hill Blue (*Lycæna* or *Polyommatus Corydon*), one of the largest of these little butterflies. As its name implies, it is found on chalk-downs and similar localities, and in such places is a very plentiful species. It is a pretty little butterfly, though not so brilliant as some of the Blues ;

very pale blue above with a peculiar soft silky lustre, and abundantly spotted beneath. As is the case with the Blues in general, the female is brown above, with a slight bluish gloss, when viewed by a side light.

The very local Great Blue (*Lycæna Arion*) may be found on the wing in this month, its principal haunts being in certain parts of Devonshire, and Gloucestershire and Northamptonshire.



LARGE BLUE.

In order that the reader may recognise this fine species, the accompanying figures are given—one showing the upper and the other the under surface of the wings.

It is not so brilliant as many of its relatives,

the upper surface being almost without gloss. The insect may be at once recognized by seven oblong black spots which are placed near the middle of each upper wing. The under side is prettier than the upper, being adorned with forty-two black spots, each having a narrow white border. There is also a double row of indistinct black spots along the edges of both wings.

A good many Hawk-Moths are out in June, one of the most conspicuous of which is the Humming Bird Moth (*Macroglossa stellatarum*), about which such a turmoil was raised in the daily papers a few years ago, much to the amusement of entomologists. It may be found in gardens, hovering over the flowers and sipping their juices while on the wing, by means of its long proboscis, which it can thrust into the deepest recesses of the flower.



EYED HAWK MOTH.

The fine Eyed Hawk Moth (Smerinthus

ocellatus) is also on the wing, as are its relatives,



CATERPILLAR OF EYED HAWK MOTH.

the Poplar Hawk Moth and the Lime Hawk Moth.



PUPA OF EYED HAWK MOTH.

Then there is the Puss Moth (*Cerura vinula*),
which is so plentiful in the caterpillar and perfect

state, and so seldom found in its pupal stage, owing to the ingenious way in which it makes a



PUSS MOTH.

cocoon in the deep crevices of bark and covers it



CATERPILLAR OF THE PUSS MOTH.

with little fragments of the very same bark which shelters it.

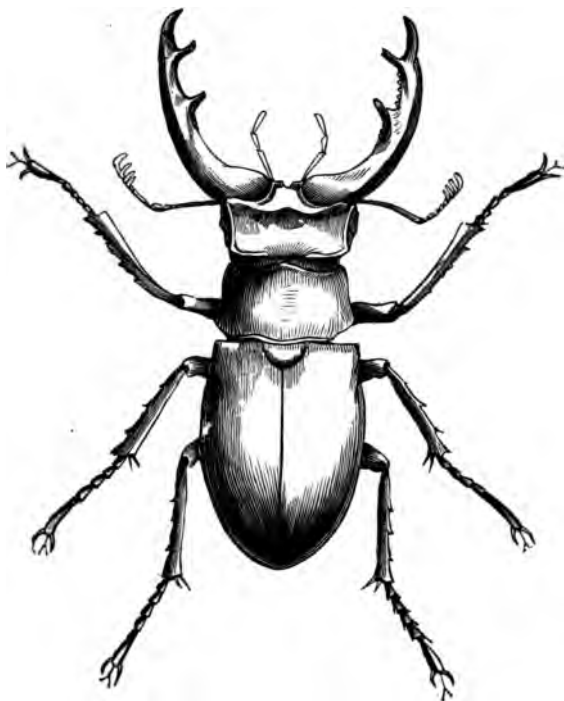
The pretty, though soberly-coloured little Pug

Moths (*Eupithecia*) are now on the wing, and it is a remarkable point in their economy that the pupa is much handsomer than the perfect insect, being adorned with various bright colours, among which red and green are the most conspicuous. Trunks of trees are favourite resting places of these little moths during the day-time, and they have a way of choosing some spot which so closely resembles themselves in colour, that even a practised eye can seldom detect them.

Several of the Prominents (*Notodonta*) are now on the wing. These are more remarkable for the appearance of the caterpillar than of the perfect insect. The caterpillars of these moths are always humped on several of the rings of the body, and, in consequence, have earned for the moths the specific title of *dromedaria*, *camelina*, *ziczac*; and as is generally the case with moths, the collector will find it easier to secure the caterpillars and rear them, than to hunt after the perfect insects.

Plenty of Beetles are now out. The great Stag Beetle, for example (*Lucanus cervus*), may be seen in the dusk of the evening, looking at a distance more like a night-flying bat or bird rather than insect, so large a space does it take up in the air with its spread wings and elytra. Although June is the usual month for the Stag Beetle, it often comes out much earlier, and on

April 1 of the present year (1872) I found a female Stag Beetle in a road near my house.



STAG BEETLE.

The curious little Pill Beetle (*Byrrhus pilula*) may be seen by those who know how to recognize it, crawling slowly along dusty roads, or lying quite still at the approaching tread of the

observer, and managing to look just like a little oval stone.

The heavy, thick-bodied, violet-coloured Oil Beetles (*Meloe*) may also be found plentifully, distilling from the joints of their legs a tiny drop of clear, yellowish oil when they are handled. At the beginning of the month the common Cockchafer makes its appearance, followed at the end of June by the Summer Chafer, which is very much like the Cockchafer, only smaller, and without the row of triangular white spots along the sides.

Most of our smaller birds are now hatching their eggs, so that the collector will find but few chances of adding to his stock, unless, indeed, he should come upon the nests of some of those birds which have more than one brood in the course of the year. These, however, will be found towards the end of the month or in the beginning of July.

Still there are one or two that do lay in June, such as the Spotted Flycatcher (*Muscicapa grisola*), whose nest, with its pretty speckled eggs, may be found hidden away in holes of walls and similar localities. The well-known Greenfinch, or Green Linnet (*Fringilla chloris*), also lays at the beginning of June, and so does the Reed Warbler (*Sylvia arundinacea*). Owing to the conditions under which it lives, the bird is *necessarily local*, and can only be found where

reeds flourish. The wonderful nest is fastened between the smooth stems of the common reed, and is very deep, so that the eggs are not flung out, however much the reeds may be swayed by the wind.

Several of the shore and marsh-loving birds lay in June, among which may be mentioned the common Gulls and Terns. The Partridge lays in June, and so do the Ptarmigan and Golden Plover, the nests of these two latter birds being anything but easy to find, even by persons who have had some experience in egg-hunting.



SPOTTED FLYCATCHER.

JULY.

AS to trees that bloom in July, there is little to be said, because there are so few of them. One, however, the Lime, or Linden, is conspicuous for its sweetly-perfumed flowers, whose yellow clusters are made musical by the hum of the multitudinous bees that come to seek the honey from the blossoms as long as they remain



LEAF OF LIME.

on the tree. This tree is very dear to entomologists because it furnishes food to the larvæ of many moths, of which the Wood Leopard,

the Lime Hawk Moth, the Buff-tip, and the large Emerald are the best known, and the Kentish Glory the most valued.

With regard to the herbs and flowers, we are again obliged to make a very small selection from a very great number.

We can scarcely call the Tamarisk (*Tamarix Gallica*) a tree, although it sometimes grows to such a size that it almost ceases to be a shrub. It is found plentifully along the cliffs of our southern coasts, and a very pretty shrub it is, with its waving, feathery green boughs, and its spikelets of tiny white flowers, their petals touched with the slightest possible shade of pink. Coast-guardsmen seem to have a great hankering for the Tamarisk, and wherever a station is situated on a cliff, the Tamarisk is tolerably sure to form a hedge to the commanding-officer's garden.

In waste places, the Wild Mignonette (*Reseda lutea*) is found in abundance. About three miles from my house, there is a quarry formed by cutting away the side of a hill. The floor, if we may so call it, of this quarry is traversed by several roads and tramways, and in the waste spots between these roads the Wild Mignonette flourishes luxuriantly, many of the stems running to a full yard in height, and thickly clad with the tiny yellow flowers. It is a sad pity that the flowers, which very much resemble those of

our garden Mignonette, are not fragrant in proportion to their size. In that case the quarry—a singularly unsightly one—would be filled with perfume, but, unfortunately, the blossoms are almost entirely scentless.

The hedgerows on chalk soils are often now laden with the sweet white blossoms of the White Clematis, or Traveller's Joy (*Clematis vitalba*), which hangs in heavy masses from every point of vantage, and is always lovely—in spring time, for its trailing clusters of soft green foliage; in summer, for its abundant, sweet-smelling flowers; and in autumn, for its silver-plumed fruit, which looks at a little distance as if the plant was covered with snowy-white flowers.

In marshy and especially in boggy ground may be seen the curious little Sundews (*Drosera*), which derive their popular name from the peculiar character of the short, rounded leaves. These are covered with an abundance of red, sticky glands, which act exactly like the "catch-em-alive-O" papers sold in the streets. Flies innumerable, especially those of the minute kinds, are attracted to the leaves, and as sure as they settle on the sticky surface, there they remain until they die.

Three species of Sundew inhabit England, and all bloom in similar places and at the same time. Two of these, the Common Sundew (*Drosera rotundifolia*) and the Long-leaved

Sundew (*Drosera longifolia*), have the leaves rounder, those of the latter plant much resembling long-handled battledores. The third species however, the Great Sundew (*Drosera anglica*) has them narrow, oblong, and somewhat resembling cricket-bats.

In July the hedges are made glorious by the splendid, though short-lived, blossoms of the Great Bindweed (*Convolvulus sepium*), whose white, bell-like flowers hang in abundance from the long, trailing stem. The Small Bindweed (*Convolvulus arvensis*) is also abundant, with its little pinky flowers, and both are apt to cause great vexation to the farmer by springing up in his corn-fields, and binding together the wheat with their twining stems. There is another species which has as large a blossom as the Great Bindweed, but of a pink colour, like that of the Small Bindweed. This is the Sea Bindweed (*Convolvulus soldanella*), which, as its popular name infers, is a sea-side plant, and therefore local.

Then we have in this month the various Willow herbs, which remain in blossom until the end of August, or sometimes even later. The most conspicuous of them is the Great Hairy Willow-herb (*Epilobium hirsutum*), which sometimes attains a height of five feet. This splendid plant needs much moisture, and is therefore generally found in ditches and such-

like places. All who have visited Oxford in the summer time will remember the magnificent sight presented by the Isis and Cherwell, especially of the latter river, fringed as they are with dense masses of the Willow-herb, swaying their tall pink heads in the breeze.

As is the case with many of our most conspicuous plants, this Willow-herb has several popular names. It is known in some parts of England by the name of Codlins and Cream, and in others by that of Cherry-pie, both names being due to the peculiar odour of the flower, which bears some resemblance to that of cooked fruit. Even after the flowers have gone, its beauty does not desert the plant, for the bunches of silk tufted seeds which follow the flowers are singularly beautiful.

Among the other Willow-herbs are the French Willow-herb (*Epilobium angustifolium*), or Rose Bay, which may be found occasionally in moist and shady places, but is only seen in gardens when it is cultivated for the sake of its beauty. Another species, the Broad-leaved Willow-herb (*Epilobium montanum*), is an inhabitant of dry places, choosing old walls and similar localities for its resting-place. Its colour is bright rose, and it is but a little plant, ranging from three or four inches to a foot in height.

In wet places may also be found the Purple Loose-strife (*Lythrum salicaria*), a plant almost

as handsome as the Willow-herb itself, with its spikes of purple blossoms rising to the height of some three or four feet above the ground.

Then in the water itself are many plants in blossom, of which we can make but a small selection.

First and foremost of them is the magnificent Bull-rush, or Cat's tail (*Typha latifolia*), with its stout, stiff stem, and its furry-brown spike rising to the height of five or six feet. This is a favourite plant with children, who play at soldiers with it, the straight stem answering to the shaft of a spear and the brown spike to the head. It is found in stagnant waters, and does not object if the water be rather brackish, often flourishing abundantly in the muddy pools formed by the overflow near the mouths of tidal rivers.

There is another plant which is sometimes called the Bull-rush, so that some confusion takes place when the popular name is used. This is the Great Club-rush (*Scirpus lacustris*), which sometimes grows to the enormous height of eight feet. Its flowers, however, are not arranged like those of the preceding plant, but supported on the end of slender, diverging foot-stalks.

Then there is the Water Aloe, or Water Soldier (*Stratiotes aloides*), which derives its name from the shape of the leaves, which are

sword-shaped, something like those of the aloe, and furnished round the edges with bold prickles. The flower is white, with the least tinge of grey, and altogether the plant is a conspicuous one.

The last plant which we can mention is the Arrow-head (*Sagittaria sagittifolia*). This plant derives its name from the shape of the shining green leaves, which are exactly like the flat, deeply-barbed flint arrow-heads used by



ARROW-SHAPED LEAF.

the North American Indians, who cannot procure fire-arms. It is quite impossible to mistake this plant, for its peculiarly-shaped leaves at once proclaim its identity, even without its pretty white flowers, with the purple blotch at the base of each petal.

Some of our finest Butterflies appear in July. Both the Large and Small Tortoiseshells are *now abroad* ; the latter one of the most plentiful

species in England, the former not so common. The large Tortoiseshell (*Vanessa polychloros*) is



LARGE TORTOISESHELL.

mostly to be found near or in woods, especially those in which the elm, aspen, or white-beam



SMALL TORTOISESHELL.

abound. During my Oxford days it was tolerably common in and near Bagley Wood,

and occasionally was seen on the banks of the Cherwell, or even within the city itself.

This is the best time of year for the insect, as its wings are newly developed, fresh, bright, and perfect. Somewhere about the middle of August the Butterfly goes into winter quarters, and re-appears in the warm days of spring, when it flits about in search of a mate. Its wings, however, worn with its summer month of wandering, are mostly rubbed and often ragged.

The two Tortoiseshell Butterflies resemble each other not only in their colours, but in the dispositions of the markings, so that the novice finds some difficulty in distinguishing the two species. The difficulty is further increased by the liability of this Butterfly to variation in size, so that a small specimen of the Great Tortoiseshell is no larger than a fine specimen of the other species. Still, there is a nameless something about the two insects which at once distinguishes them to the eye of an entomologist, and in any case the colours of the Large Tortoiseshell are never so bright, nor are the markings so clearly defined, as in the small species.

In this month is to be found the splendid Purple Emperor, or Emperor of Morocco (*Apatura iris*). Oak woods, with occasional wet places, are favourite resorts of this grand *Butterfly*. Darent Wood, for example, is a

well-known locality for it, and is frequented in the summer time by entomologists who wish to add the Emperor and Empress to their collection. Three specimens in my own cabinet were



PURPLE EMPEROR (MALE).

taken in Bagley Wood, two being males and one female.

Now-a-days, the Purple Emperor has lost much of its value as a rarity, because it can be trapped by means of decaying animal matter, on which it loves to feed. So fond are they of this repulsive diet, that Mr. Hewitson once took seven specimens at a stroke, whilst they were absorbed in drinking the unclean liquid that drained from spots on which swine had been herded.

The White Admiral (*Limenitis camilla*), so conspicuous for the bold white stripe across its black wings, is to be found in July. Wooded



WHITE ADMIRAL.

places, in which the honey-suckle is abundant, are the best localities for this striking insect, inasmuch as the caterpillar feeds on the leaf of that plant.

The Painted Lady (*Vanessa* or *Pyrameis cardui*)

is on the wing at the end of July if the weather be propitious. This most inconstant of insects will sometimes appear in wonderful numbers



PAINTED LADY.

and then will scarcely be seen for a succession of years. It is a tolerably easy one to catch *when on the wing*, as it does not rise to any

great height, and does not dodge about as much as do many of our Butterflies.

As its scientific name implies, the larva feeds on the common thistle (*Carduus arvensis*); but the perfect insect does not seem to trouble itself much about the thistles, flying merrily over waste grounds, especially if they be of a gravelly nature. Indeed, the greatest swarm of Painted Ladies that I have ever seen were secured in a small gravel-pit, which was so filled with them that two or three could be taken with a single stroke of the net.

Passing over many other Butterflies, we come to the Moths, of which there is a goodly store in



TIGER MOTH.

July. Somewhere about the middle of the month we may expect the common Tiger Moth, with its splendid and most variable markings of brown, cream, black, and scarlet. This moth is

developed from the well-known hairy caterpillar called the Woolly Bear, which may be seen in such abundance towards the middle of June, as it crawls over the paths in search of a suitable resting-place during its pupal stage. The caterpillar prefers the leaves of the white dead-nettle to any other food, but it is in no wise particular, and will eat almost any kind of leaf when it cannot obtain the dead-nettle.



OAK EGGAR.

The well-known Oak-eggar Moth (*Bombyx quercus*) is on the wing in this month. This moth has always been a favourite of mine, for, although it is not adorned with brilliant colours, it is yet a very pleasing insect in point of appearance, and in all its stages of existence is a capital study for the comparative anatomist. I have reared hundreds of Oak-eggars for the purpose of studying their anatomy, and have traced

the development of the various organs from the early larval condition to the perfect state.

The caterpillar, in particular, is well adapted for this purpose, as it is large, and so saves much trouble to the dissector, and is so hardy that it can be reared without any difficulty. It cer-



COCOON OF OAK EGGAR.

tainly has a voracious appetite, and to keep a great number of these caterpillars supplied with food is rather an arduous task ; but when this is done, the creatures rarely give any trouble at all.

Several of the Dart, Feather, and Heart, Moths, all belonging to the genus *Agrotis*, are to be found in this month, and so are many of the large genus *Cidaria*. Representatives of the genus *Noctua* may also be seen, together with others too numerous even to mention.

One, however, is too conspicuous to be passed by. This is the beautiful Dark Crimson Underwing (*Catocala sponsa*), with its yellowish-grey mottled upper wings, and its dark crimson

under-wings, with their black edge and black wavy stripe through the middle. It is rather local, but may be obtained in oak woods.



DARK CRIMSON UNDERWING.

In this month may be seen the pretty little Cinnabar Moth (*Euchelia Jacobææ*), so remarkable from the fact that its scarlet and black wings are exactly alike on both surfaces. The caterpillar is a very pretty one, reddish-yellow with bold black rings. If touched when on its food-plant, the common Ragwort, it drops to the ground, and coils itself into a ring.

We now come to the birds, many of which are now engaged in laying or hatching their second brood of eggs. First among these is the Heron, whose lofty nest is now so rare in England, and scarcely ever seen except in grounds that are carefully preserved and watched. A heronry, perhaps from its rarity, is an interesting sight, but it *does* grievously offend the nostrils at close

quarters, the odour of decomposing fish not being, as Artemus Ward remarks of the negro, "the sweetest kind of perfumery." Still, putting aside the olfactory offence, the heronry is worth seeing at breeding-time, the sights and sounds being so utterly unlike those of any other place.

There are, however, so many birds which are now engaged upon their second brood that it is needless to enumerate them. Suffice it to say that towards the end of July or the beginning of August, we see signs that several of our migratory birds, who have cheered us during the summer time, are preparing for their removal to other lands, the chief of which signs is the conduct of the swallows, which begin to congregate on rocks and buildings, the sure precursor of their coming flight.

AUGUST.

THIS is a good month for the water-loving plants, many of which are now in blossom ; and salt marshes, the seashore, and wet places generally may be searched with advantage. We will take, for example, the seashore, and its immediate neighbourhood, and see what we can find there.

Descending to the muddy marshes which fringe many parts of our coasts, we shall find the various Glass-worts, belonging to the genus *Salicornia*. In many places these thick-spiked, fleshy, yellowish-green plants quite cover the ground, and at a little distance look like grass. The large tract of salt-marsh that lies between Rochester and Sheerness, and which is cut into multitudinous islands by the creeks (or criks, as the aborigines call them), is a favourite locality for the Glass-worts. These plants derive their name from the fact that, as they contain a large quantity of soda, they have been largely used in glass-making.

The flowers are odd little yellowish blossoms.

projecting from the joints in the spikes, and lying almost flatly against them. In many places, the Glass-worts are called Samphire, and are used for the same purpose as that plant, namely, pickling. They make a very good pickle, but very soft-textured, and not nearly equal to that of the true samphire, a plant allied to the parsley and fennel race, which grows high upon the sea-cliffs, and is comparatively rare.

In similar places may be found the two Cord-grasses (*Spartina*), with one, *Spartina stricta*, with only two or three spikes, and being exactly a foot in height, while the other (*Spartina alterniflora*) has many spikes, and often grows to the height of two feet. Then, we have a companion to these plants, the Sea Meadow-grass (*Poa maritima*), reaching to a foot in height, or even more, if the soil and position be propitious, and the Procumbent Meadow-grass (*Poa procumbens*), with its single branches and short stems, seldom exceeding seven or perhaps eight inches in height.

With somewhat grassy-looking leaves, yet no grass at all, we have the Sea Plantain (*Plantago maritima*), also flourishing in salt marshes, and sometimes sending its pointed pink-white flower-tufts to a foot in height, though many plants scarcely exceed one-third of that measurement.

There are too many of these salt-reared flowers to be described individually, but there is one

which we must not pass over unnoticed. It is the Sea Beet (*Beta vulgaris*), which may be found in almost all places that are kept tolerably damp with salt or even brackish water. Like the Glass-worts, this plant is very plentiful in the Medway marshes. And, well may it flourish there, for the soft, black, tenacious mud runs to almost any depth, and its abominable odour betrays the amount of decaying substances which it contains.

In rich, favourable soils, its green leaf-spikes shoot up to some four feet in height, and then the plant has quite an imposing look.

It is from this plant that the familiar beet-root and mangold wurzel of our fields and gardens are derived. In this, its uncultivated state, it is seldom used for food, but the leaves are very good when boiled, and the root has plenty of sugar in it, and makes a good sweet-meat when candied.

Passing from the weedy soil to the water itself, we have the Sea Ruppia or Tassel-grass (*Ruppia maritima*), a really pretty, though not conspicuous plant, having long, slender, and narrow leaves, which remain beneath the water, and a very long, slender stem, scarcely thicker than pack thread, which carries on its top a tuft of seven or eight little greenish flowers, each at the end of a slight, slender footstalk, which is often convoluted like a corkscrew, so as to keep

the flowers just above the surface of the water. There is scarcely any possibility of mistaking the plant, as its long, slender, grass-like, submerged leaves and its thread-like flower-stem are quite sufficient to distinguish it.

Even in the sea itself we have an example of a true flowering plant, which has nothing in common with the sea-weed, though it is often confounded with them. This is the Sea-grass (*Zostera marina*), sometimes called Grass-wrack. Like the preceding plant, it inhabits salt ditches, but also extends into the sea itself, where there is no great depth of water, and where it is well protected from the waves.

There is scarcely a shallow bay around our coasts, especially on the more southern portions of the island, which is not thickly carpeted with this curious plant. On sandy shores, the opacity of the sea prevents it from being visible, but on those where hard rock takes the place of sand, the *Zostera* is perfectly visible in smooth weather, its long, grassy leaves waving in the water like a hay-field just before mowing.

Attempts have been made to utilize the *Zostera*, and some eight or nine years ago it was brought rather prominently forward as a material for paper-making. As yet, however, it is of little use, except perhaps for stuffing in our mattresses, and few persons care much about it except the zoologist, who trails his dredge over

its grassy surface, and secures a rich harvest of submarine treasures. Any of my readers who are in the habit of visiting the seashore, will remember that, after a storm, the beach is often covered with long heaps of the *Zostera*, bright green when they are first flung ashore, and becoming black as they are exposed to the air.

On the dry portions of the seashore are several plants that are worthy of notice. One is the Sea Campion (*Silene maritima*), one of the large and curious genus to which the different Campions and Catch-fly plants belong ; the latter deriving their popular name from the fact that several of them are viscid and hairy, so that any small insects which alight on them are captured and so perish. It has been suggested that their dead bodies act as a fertilizing material for the plant, but such an idea is erroneous.

The present species love stony spots by the seaside, where its white flowers are so comparatively large, and its leaves so small, that the eye scarcely observes the latter while taken up with the former. In some places the plant is so plentiful that the shore where it grows looks very much like a lawn covered with daisies, through which the grass-blades can scarcely be seen. There is another species of these plants, called the Dover Catch-fly (*Silene patens*), which is found, as its name imports, in the cliffs of Dover. Like the preceding species, the flower is white, but,

instead of reaching only the modest dimensions of six to nine inches, it is seldom less than a foot in height, and sometimes attains two feet. The leaf is much larger and more conspicuous than that of the Sea Campion.

Our limited space prevents us from noticing more than one or two more seaside plants, while the inland flowers we must altogether omit. One is the rather rare Goldilocks (*Chrysocoma linosyris*), so called from the pretty golden-yellow flowers which come in a tuft on the top of a stem some eighteen inches high. The plant is found on cliffs upon the southern coasts of England. The leaves are narrow, small, and with a rather peculiar smooth gloss. Another yellow-flowered plant which grows in similar spots, but is mostly found nearer the sea than the Goldilocks, is the Cotton-weed (*Diotis maritima*), so called from the dense coat of down with which the whole plant as far as the very petals themselves, is thickly covered, and which looks as if a quantity of cotton wool had been cut in short lengths and stuck over the plant.

Near the sea, though not actually on the shore, may be found the Sea-Celery (*Apium graveolens*), which sometimes reaches the height of four feet. It generally prefers road-side ditches, and similar localities, where the water is somewhat brackish, though not absolutely salt. There is a

road near Sandwich, along which I was driving this summer, and which in some parts is thickly edged with the Sea-Celery, whose deeply cleft leaves waving in the breeze had a singularly beautiful effect.

Now for some August birds.

The migration, which has been almost in abeyance during the last two months, now sets in again.

At the beginning of August, that erratic and cunning bird, the Cross-bill (*Loxia curvirostra*), may sometimes be seen. Not that it is restricted to August, for it occasionally visits us in almost every month in the year, but, as it is essentially a seed and kernel eater, it most frequently comes when the various fruits are ripening. These birds go in flocks, and whenever a flock of them gets into an orchard, they make terrible havoc among the apples. They do not eat the fruit itself, but only the pips, and, with their scissor-like beaks, have a curious way of severing an apple in two with a single bite, and then picking out the pips with the sharp points of the bill.

The seeds of pine and fir-cones are also a favourite diet of the Cross-bill, which twists off the scales and then eats the seeds as they lie exposed. Hawthorn and Mountain-ash berries also are eaten by the Cross-bill, which indeed is not very particular as to the seed or berry on which it feeds. Occasionally the Cross-bill

breeds in England, but such an event is very rare.

In obedience to the old adage, "In August go he must," the Cuckoo finally departs in this month. His voice has been gradually breaking, like that of a boy who has just learnt to sing at sight, and at last he has come to the conclusion that such a voice had better not be endangered. So, although we may still see his hawk-like form passing from one tree to another, his monotonous cry has for some time been unheard, and so we scarcely miss him, until we find that he has altogether gone.

That really handsome bird, the Knot (sometimes called the Red Sandpiper, from the reddish chestnut of the adult male plumage), now comes back from its northern residence, where it has been rearing its young. It generally remains here until April, when it gradually disappears northwards. Its scientific name is *Tringa canuta*. Like most of its kin, it takes up its residence in sheltered bays, on the mouths of tidal rivers, and, as it occurs in great numbers, and is very good eating, it is largely caught for sale.

As far as birds go, the beginning of the autumn season is made more apparent upon the seashore than in the inland.

The Swift also goes at the end of the month. *I am always sorry when this bird disappears.*



CROSSBILL.

It is not a pretty bird in colour, nor has it a sweet song ; its colour being dull black, and its cry a piercing scream. But the bold firm curves of its outstretched wings are singularly beautiful, and the wonderful powers of flight which it displays are absolutely fascinating to the eye. Hour after hour will it remain on the wing, flight appearing to cost a Swift no more exertion than swimming costs a fish, and every now and then the shrill scream is heard, sounding more like a cry of pain than what it really is—an utterance of exuberant gladness.

'The Sand-martin also goes somewhere about the middle of August, while the Swift often remains until the end. In this month, the Lapwings have a habit of congregating together, as do many birds before they migrate. In one sense, the Lapwing is not a migratory bird, inasmuch as there is scarcely any part of the year in which some specimens may not be seen, and in some parts of Great Britain they are absolutely stationary. Still, the greater number do undergo a more or less complete migration, and so we may reckon these birds as partial migrators.

A flock of Lapwings while in flight is singularly beautiful. Owing to the bold contrast of black and white, which is shown strongly by the slow flapping of the wings, which has given the bird its popular name of Lapwing, it is easily detected at a considerable distance. Its other



SWIFT.

names, of Peewit, Te-Whit, etc., are given to it on account of its cry, which has a curious resemblance to those two syllables.

Birds are now on the move in many parts of the country, and towards the end of August, quite a stir begins among them, some arriving, and others taking their departure. The Grey Plover, for example (*Squatarola cinerea*), sometimes called the Grey Sandpiper, generally comes in August, and goes away again in December, its time of residence being very short. It has the name of Grey Plover, because it seems to be grey at a little distance. In reality, however, it is spotted with black and white, the two colours merging together into grey unless the bird is seen closely. It haunts the flat, underlying coasts in search of food, and often occurs in considerable numbers.

There are many other similar birds that thus make their appearance in August, but we have not space for their enumeration.

We now pass to the insects of August.

This is a good month for finding those extraordinary little beetles, scientifically termed Brachini, and popularly Bombardiers; the former word alluding to the abrupt and apparently shortened ends of the elytra, and the latter to the remarkable power which these insects possess of ejecting a volatile fluid when pursued or alarmed. *Like that which is secreted by the skunk, and*



LAPWING.

one or two other animals, the bird possesses a powerful odour, but it has besides the property of exploding as soon as it comes in contact with the air, producing a small cloud of bluish smoke. The Beetle can be found under stones near the mouths of tidal rivers.

Many other Beetles are about, but we must now proceed to the Butterflies.

In August and September, some of our finest Butterflies make their appearance. The Peacock, Purple Emperor, Large Tortoiseshell, and others, still remain on the wing, and are now joined by insects that rival, if they cannot surpass, them in beauty.

We give the place of honour, where it is deserved, to the Camberwell beauty (*Vanessa Antiopa*), so common on the Continent and so rare in this country. It is a Butterfly which no one who has once seen can possibly mistake, and a glance will immediately detect it even when on the wing. This splendid Butterfly has its rich chocolate-coloured wings edged with a black band, a row of blue spots, and broad band of white, which runs completely along the outer edges of the wings. It is rather remarkable, by the way, that acknowledged indigenous specimens have this band white, while in Continental specimens it is yellow.

Not so large as the Camberwell Beauty, but *more* brilliantly coloured, the Scarlet Admiral

(*Vanessa Atalanta*) now comes on the scene, just in all the glory of his new plumage. He may be seen in the spring also, but then he is comparatively shabby and ragged, having brushed all the gloss off his wings in his autumnal gambols.



CAMBERWELL BEAUTY.

This is one of my special insect favourites. I do not know a handsomer Butterfly among our English species, and think that it can hold its own even against the gorgeous inhabitants of the tropics. Its flight is singularly beautiful, and I know no more pleasing sight than a number of these splendid Butterflies floating about, and seeming to pass through the air, like the Swift.

almost by volition rather than by the action of the wings.

Then there is the well-known Painted Lady (*Cynthia cardui*), which is so uncertain in its



SCARLET ADMIRAL.

appearance and so plentiful whenever it does please to show itself. Though not so splendidly coloured as the last-mentioned Butterflies, this *is really* a fine insect, the beautifully mottled

gradations of its plumage affording quite a study in soft colouring.

A pretty little Butterfly, called the Brown Hair-streak (*Thecla betulæ*), makes its appearance in this month.



BROWN HAIR-STREAK.

This is one of a small species of Butterflies which go by the name of Hair-streaks, in consequence of a fine, hair-like line on the under surface of the wing. There are, for example, the Green Hair-streak, the Black Hair-streak, the Purple Hair-streak, the White-letter Hair streak, as well as the present example, which is the largest of the five, and is therefore selected for illustration.

Our space will only allow us to mention two August Moths. One is the Brown-tailed Moth (*Liparis chrysorrhæa*), remarkable for a large tuft



BROWN-TAILED MOTH.

of brown hair at the end of the body. When the female Moth lays her eggs, she pulls off the hair, and with it makes a sort of conical thatch



SILVER Y MOTH.

over the eggs, by which they are protected from rain. The caterpillar spins a slight web among the leaves when it is about to change into a *chrysalis*, and in some seasons is so abundant

that the hedges are quite covered with the white silken webs.

The last Moth which can be mentioned is the Silver Y (*Plusia gamma*), so called from a white mark on the upper wings, very much resembling the capital letter Y. The Caterpillar is a very general feeder, and the Moth is plentiful.

SEPTEMBER.

THERE are not many plants that specially blossom in this month, though there are many that retain their flowers. Among the September blossoms we may notice the pretty little Acrid Lobelia (*Lobelia urens*—*i. e.*, burning), which is tolerably common in some of the southern parts of England, growing on heathlands, and raising its spikes of light purple flowers about a foot from the ground.

Then there is the Thorn-apple (*Datura stramonium*), which may be found growing on waste lands, its white flowers showing boldly against the spear-shaped, jagged leaves. The Thorn-apple is a great favourite with those who prepare skeleton plants, both the fruit and the leaves looking remarkably handsome when properly dressed and bleached. The plant is slightly narcotic, and its use in asthma is now well known. Many botanists refuse to accept the Thorn-apple as a British plant, but it has so thoroughly acclimatized itself that it has a fair *right to that title*.

Another plant of the same order, the Garden Nightshade (*Solanum nigrum*), is now in flower. It is rather remarkable that the Thorn-apple, the Henbane, the Deadly Nightshade, the Woody Nightshade, and the Garden Nightshade, all of them more or less noxious, should be closely allied to the potato. I well remember, as a child, being quite astonished at the similarity between the flower of the potato and that of the Woody Nightshade, whose beautiful scarlet berries I knew to be poisonous.

In wet places, especially those of a muddy, marshy character, the Slender Horsetail (*Chara gracilis*) may be seen. It is not at all a common plant in this country, though in the Channel Islands it is tolerably plentiful.

In September the Saffron Crocus (*Crocus sativus*) is in flower. This is supposed to be an imported plant, but as it has been known to exist in this country for some five hundred years, it is fully entitled to the name of British. It is not generally spread over the country, and is only found in one or two places in Essex and Cambridgeshire. Its flower is pale blue, and the stigma, which is deeply cut into three parts, is the saffron of commerce.

It has almost gone out of use as a medicine, and is employed merely as a colouring or flavouring agent. One use of the plant is, on the authority of the "Medical Botanist," to be

very heartily condemned. "American Soothing Syrup;" this vile nostrum, which is puffed off in the papers as "a real blessing to mothers," is nothing more than syrup of saffron, with a portion of nitrate of potass or saltpetre, and laudanum.



MEADOW SAFFRON.

The common Meadow Saffron (*Colchicum autumnale*) is also in blossom in this month. It is the bulb of this plant which is so extensively used in medicine, especially in the case of gout

- or rheumatism. For this purpose it had been employed by the ancients, but fell into disuse for so long that the "Hermodactylon," as the medicine was called, could not be identified. The late Mr. Want, however, succeeded in proving that the Hermodactylon, which was so powerful as to have earned the title of *Anima articulorum*, or Soul of Joints, was nothing more than the common Meadow Saffron. It may be found in pasture lands, and prefers a rather moist and rich soil. In Warwickshire, the
- popular name of the plant is Naked Ladies, because the flowers appear without the leaves. The flower is a rather pale purple.

Several of the large genus *Polygonum* may now be found in blossom. Such, for example, is the common Bistort (*Polygonum bistorta*), sometimes called Snake-weed. The root of this plant is a powerful astringent, and has been employed successfully in ink-making, for the cure of ague, and similar purposes. In some parts of the country, the young shoots are eaten under the name of Patience Dock. The plant is found in waste lands, and is sometimes so plentiful as to be reckoned as a troublesome weed.

Then there is the common Knot-grass (*Polygonum aviculare*), which is so plentiful in pasture land, running along the ground, and throwing up at intervals its short flower-bearing stems. There is a variety of this plant called the Sea

Knot-grass, in which the leaves are flatter and more pointed than those of the inland variety. It is found on seashores. The common Buckwheat belongs to this genus, and so do all the Persicarias, several of which, especially the Spotted Persicaria (*Polygonum Persicaria*) and the Biting Persicaria (*Polygonum hydropiper*), are found in wet places.

The equally large genus of *Mentha*, or the Mint tribe, is now in blossom. Wet places are also the best spots in which to search for these fragrant plants, among which we can only make the following selection: The common Peppermint (*Mentha piperita*), whose peculiar odour fills the air if the foot but brush against the leaves; the Bergamot (*Mentha citrata*), which is so much used by the makers of perfumes; the Spear-mint (*Mentha viridis*), used for various culinary and medicinal purposes; and the Pennyroyal (*Mentha pulegium*), much employed for the same objects.

One of the most conspicuous of our September flowers is the common Golden-rod (*Solidago virgaurea*), which may be found on dry banks, its straight, tall stems, covered at the top with bright yellow flowers, often attaining a full yard in height. The two Fleabanes (*Pulicaria*) are also common in this month, and, like the Golden-rod, have yellow, composite flowers. *This plant was at one time greatly valued by*

surgeons, as it was thought to possess a peculiar power of healing wounds.

The well-known Chicory (*Cichorium intybus*) is another of the September flowers, its stems varying from a foot to a yard in height, and its pretty pale blue flowers often studding thickly the stubble-fields. The use made of its root has long been familiar to all coffee-drinkers.

Fungi now become plentiful, and will, I hope, soon take their proper place as articles of food. As a rule, we only eat one kind of fungus, rejecting all others ; whereas a very great number of our British fungi are not only eatable, but exceedingly nutritious, and capable of being cooked in a variety of ways. Indeed, anyone who is skilled in fungi can furnish himself with a good and sufficient dinner without troubling the butcher, the fishmonger, or the greengrocer.

Now for some of the September insects. That really splendid insect, the Peacock Butterfly, appears in this month, and is then in full perfection. Like the Scarlet Admiral, it emerges from the chrysalis state in autumn, plays about for a few weeks, and then retires to some place of concealment, wherein it lies, or rather hangs, hidden until the following spring. Then, with wings ragged, blurred, and worn, the insect once more comes into the daylight, bent on the only business of its butterfly life, namely, settling a new brood in the world.

It is curious, by the way, to watch the different demeanour of the Butterfly at these two



PEACOCK BUTTERFLY.

seasons. In the autumn it is full of play, fluttering about on its beautiful wings, and passing *from flower to flower* without any aim except *that of amusing itself*. In the spring it is full of

work, flying about as much as ever, but with a very different aim. Instead of merely flitting from one flower to another, the insect is busily engaged in inspecting the stinging-nettles, looking for a favourable spot in which to place her



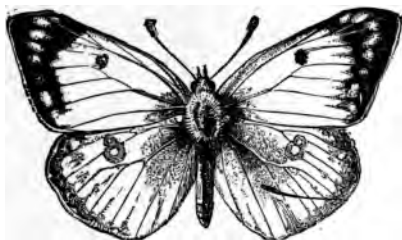
CATERPILLAR OF PEACOCK BUTTERFLY.

eggs. So different is the mode of flight, that a practical entomologist can tell by a mere glance whether a Butterfly is bent on business or pleasure ; in the one case the flight being quite aimless, whereas in the other it has an evident object.

There is no difficulty whatever in breeding this beautiful Butterfly. The larva is to be found in plenty on the stinging-nettle, a black, white-spotted caterpillar, covered with long spikes, and feeding in groups which appear to be small while the caterpillars are young, but are so large when they are full-grown, as to be like

bundles of black wool tied round the stems of the nettles.

The Pale Clouded Yellow Butterfly, sometimes called the Clouded Saffron (*Colias hyale*), makes its appearance in the autumn, and may be found in the present month. Though specimens have been found in almost every part of



PALE-CLOUDED YELLOW BUTTERFLY.

the country, it is chiefly a denizen of seaside localities. I have seen it absolutely swarming on the coast between the Reculvers and Deal, the pretty insect flying about in such multitudes that I could have caught any number had I wished to do so.

Like several other Butterflies, it is very fitful in its appearance. Although thousands of them may be seen in one year hovering over the food-plant of the larva, and so giving promise of an abundant brood next year, nothing more is seen of the Butterfly for a series of years, when it

suddenly turns up again, without having given any previous indication of its presence.

That very common little Butterfly, the Small Heath (*Cænonympha pamphilus*), may be seen in numbers in this month flitting over the grass



SMALL HEATH BUTTERFLY.

and heather, and scarcely ever rising to any height from the ground. It has a habit of associating with the various "Blues," and its mode of flight very much resembles theirs. The caterpillar feeds on different grasses.

Some of our finest Moths make their appearance in this month. First, in size, if not in beauty, comes the Death's-head Moth, the largest of our British lepidoptera. Considering its size, I have often wondered why so few specimens are taken, particularly as it is very plentiful in suitable localities, such as potato-grounds. It is true that the insect flies by night, but so do many others, which are neither so large nor so plentiful as the Death's head, and yet are caught in plenty.

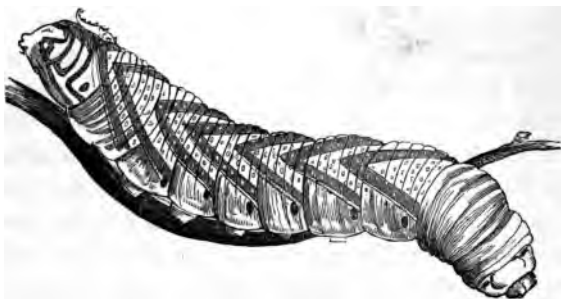
To rear this splendid Moth is not at all diffi-

cult, for the field-labourer will always, for a con-



DEATH'S-HEAD MOTH.

sideration, save the pupæ which they dig out of



CATERPILLAR OF DEATH'S-HEAD MOTH.

the potato-field ; but to catch the perfect insect is a feat which is seldom achieved, even by those

who are accustomed to such pursuits. The potato is the usual food of the caterpillar, but it also feeds on the jessamine, on which plant I have taken it.

Then there is the caterpillar of the Privet Hawk Moth (*Sphinx ligustri*), which is compara-



PRIVET MOTH AND LARVA.

tively common, and is frequently taken, both as a caterpillar and in its perfect state. It is easily reared, feeding freely on the shrub from which it derives its name, and looking wonderfully handsome when full-grown, the diagonal purple stripes on its green body serving to distinguish it from the leaves of its food-plant. It is very

voracious, and requires a constant supply of fresh leaves; but if care be taken to give it plenty of food, it is hardy enough, and gives scarcely any trouble.

In the preceding Moths, both the insect and the larva are handsome, and in the latter both are beautifully coloured. The Sword-grass Moth (*Calocampa exoleta*) is remarkable for the extreme beauty of its larva, though the Moth itself is exceedingly plain, its hues being simple grey, brown, and white. The caterpillar, however, is a splendid creature, its ground colour being green, striped with white and scarlet, and having a double row of eight little marks of white, edged with black.

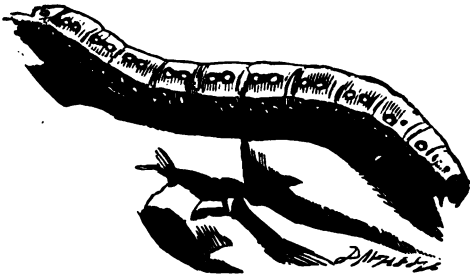
Some other remarkable insects make their appearance in September. Among them is the Great Green Grasshopper (*Acrida viridissima*), which people will persist in calling a locust. Throughout the summer months the larva of this insect may be found plentiful, especially if the sweep-net be used. In my garden there is a clump of hop, which is a very favourite haunt of this insect. It crawls very leisurely from one leaf to another, and if alarmed it at once loosens its hold, and falls among the thick foliage, where it is perfectly safe from discovery. It is as well, by the way, to keep the fingers from the jaws of this insect, for they are sharp and powerful, and *can give a very hard nip.*

There is another insect, also, one of the Grasshoppers, which is popularly called the



SWORD-GRASS MOTH.

Wart-biter (*Decticus verrucivorus*). Like the preceding insect, the Wart-biter has strong and



CATERPILLAR OF SWORD-GRASS MOTH.

sharp jaws, and is quite ready to use them. Many people think that if the insect be allowed

to bite a wart, that troublesome excrescence will soon depart.

The migration of the birds is now beginning to show itself, and arrivals and departures take place rapidly, the latter being more numerous than the former. Away goes the Nightingale, less missed than he might have been had not his lovely voice been silent for many weeks. When the time of song is quite over, and the Nightingale contents himself with scolding instead of singing, it is amusing to hide near the nest of a Nightingale, and challenge him to sing by whistling imitations of his song. Although his voice has gone, his courage remains, and he does his best to answer the challenge, sometimes actually succeeding in getting out a few real notes.

For the Nightingale is one of the boldest of birds. He will sing within arm's length of anyone who knows how to manage him, and can be made to exhaust all his vocal resources, and to produce the most marvellous notes from his little throat. There are some tones in a Nightingale's voice which never seem to be produced unless under some such stimulus.

My house is surrounded with Nightingales, and for the last ten years I have watched their ways and listened to their songs; but there is one liquid trill which I never heard except *under the circumstances* that I have mentioned,

and, out of the many Nightingales around us, only two or three can produce it, and those but for a very short time. The sound is absolutely beyond description ; it scarcely seems to belong to earth, and appears to vibrate in the heart, and not in the ear. The bird never has recourse to this marvellous trill until it has exhausted all its previous resources, and then, after a pause, as if to collect its remaining energies, it pours out its enchanting strain, and remains silent as if conscious of victory.

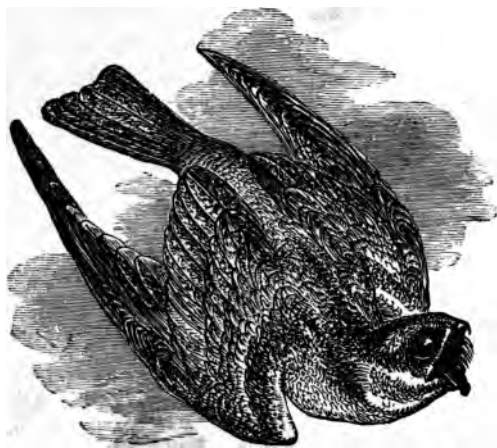


WHITETHROAT.

Away goes the Whitethroat, the most untiring of songsters. There is not very much of the song, neither is it very powerful, but the bird is constantly repeating it, and so produces a very cheerful effect. The exact time of the *Whitethroat's* departure depends much on the

weather, in some seasons the bird remaining until quite the end of September.

Away goes the Nightjar, whose strange, long-drawn cry, with its curious crescendo and diminuendo effects, has been heard throughout the summer nights, and prolonged far into the dawn



NIGHTJAR.

of the morning. In June last, I heard, at four A.M., the Skylark, the Blackbird, the Thrush, the Cuckoo, and the Nightjar, all singing together; and the effect, together with that of the sweet day-dawn odour and ever-brightening light, was almost overpowering.

Away goes the Swallow from our houses, but

we may be sure that next spring will see her back again at her old familiar house. So goes the Red-backed Shrike, whose odd mixture of valour and cowardice, folly and cunning, has enlivened many a country walk during the summer months.

Away goes the Spotted Flycatcher, and its relation the Pied Flycatcher. Personally, I miss the former bird sadly. Two of them have settled themselves in my garden, one having taken possession of a young mulberry-tree, and the other of a croquet-hoop. They seem perfectly aware that no one will disturb them, and will catch flies close to the inhabitants of the house, not as yet, however, having learned to tolerate a game of croquet, during which they invariably vanish. How they escape the numerous cats of the neighbourhood I can scarcely imagine, but hitherto they have managed to do so, and I hope will be equally successful next year.

As for the arrivals, they are mostly confined to sea-birds, but the Common Snipe and the Jack Snipe now make their appearance. Some few specimens may (as is the case with other migratory birds) remain in this country throughout the year, but, as a rule, the Jack Snipe arrives here rather before the middle of September. It has a curious way of sticking to one spot, and, no matter how often it is flushed,

always managing to slip back to the same place. In some places, as, for example, in the New Forest, it is called the Half Snipe, on account of its small size; the Common Snipe is called the Whole Snipe, and the Great Snipe is called the Double Snipe.

I have more than once succeeded in stealing on Snipes while they were feeding, and watching their movements. On one occasion the day was frosty, and the ground was covered with half-formed ice. The birds, however, seemed quite happy under the circumstances, and pattered about briskly, thrusting their long bills into the unfrozen parts of the ground, and evidently securing food.

OCTOBER.

FEWER and fewer become the flowering plants as the year draws to an end. At the beginning of the month many flowers still assert themselves, but, towards its end, "chill October" shakes off the blossoms, and leaves nothing but the fading leaves and the incipient seeds. We will first take a few of the flowers, and then pass to the fruits.

The well-known Wild Chamomile (*Matricaria chamomilla*) still keeps its pretty star-like flowers, so many of which grow among the corn, and fall by the reaper's sickle. The Grey Speedwell (*Veronica polita*) trails its grey-green stems over the ground, and shows here and there its tiny blue flowers upon the pasture lands. So does its near relative, *Veronica Buxbaumii*, whose solitary flowers are four or five times as large as those of the Grey Speedwell, and are accompanied by larger and more clustering leaves.

The common Ivy (*Hedera helix*) now comes fairly into blossom, though many plants are forward enough to put out their little clustered

pale-green flowers, the precursors of the berries which sustain so many birds during the winter months. Indeed, the Ivy is one of the great protectors of animals. Builders know well that there is nothing like the Ivy for protecting walls from the weather. Instead of being, as many seem to think, injurious to masonry, picking out the mortar from between the stones and bricks, it is peculiarly useful, sheltering them from the dashing rain, which cannot make its way through the polished leaves, but falls from leaf to leaf until it is soaked into the ground.

For the same reason, it affords a resting place for numberless birds, such as the sparrow, the robin, and above all the starling, whose services to man are beyond all calculation, and who loves no resting-place so well as an ivy-clad wall. Then, as I have mentioned, its berries afford nutriment to many birds in the winter time, and its flowers are the resort of numberless insects. Even wasps seem to take a strange delight in this flower, and, though the time is near at hand when almost every wasp must perish, hundreds may be seen buzzing about the ivy-flowers, and thoroughly enjoying their last few days of warmth.

Some of the wild geraniums are now in flower. The soft Crow's-bill, sometimes called Dove's-foot (*Geranium molle*), keeps its pale purple flowers well into October, though it generally

begins to blossom in September. It is a pretty little plant, very plentiful on dry pasture land, and seldom exceeding six inches in length. The well-known herb Robert (*Geranium Robertianum*) also remains in bloom, having continued to flower for some four months. There is no mistaking this pretty flower, its red petals with white streaks pointing it out at once as it grows in the hedge-rows. The Shining Crane's-bill (*Geranium lucidum*), so called from the glossy, bright-green leaves, is still in bloom on rocks and walls.

The Spotted Dead-nettle (*Lamium maculatum*) may be found in hedge-rows. It is not common, and might be mistaken for a pale variety of the Red Dead-nettle, were it not distinguishable by a white spot on each of the lower leaves, from which it derives its name. The Red Hemp-nettle (*Galeopsis ladanum*) now blooms, its purplish flowers being sometimes a foot above the level of the soil. The yellow-flowered Dwarf Hemp-nettle (*Galeopsis villosa*), the common Hemp-nettle (*Galeopsis tetrahit*), and the Bee-nettle (*Galeopsis versicolor*), mostly retain their flowers well in October.

The Wall Rocket, sometimes called the Narrow-leaved Wall Mustard (*Sinapis tenuifolia*), remains in bloom throughout the earlier portion of this month, both the yellow flowers and the long, narrow seed-pods being seen at the same time.

As its popular name implies, it is one of the mustard tribe, and grows on old walls, rubbish heaps, and in similar localities. Unlike the common Mustard (*Sinapis nigra*), it has a very unpleasant odour, and is quite unfit for food. The Field Mustard (*Sinapis arvensis*) still retains its blossoms, but, as it mostly grows in corn-fields, it generally shares the fate of the corn, and perishes under the blade of the sickle or the reaping machine.



BILBERRY.

This is one of the chief fruit months. Putting aside the cultivated fruit as being foreign to our purpose, we may find the Bilberry, or Whortle-

berry (*Vaccinium myrtillus*), growing plentifully upon the hilly and mountainous grounds. The berries are largely brought to market, but, in my opinion, there is only one way in which Bilberries ought to be eaten, *i.e.*, in their own haunts, and plucked freshly from the plant before they have lost the rich purple bloom that is spread over them, and, like that of the plum or grape, perishes at a touch. That Bilberries are used in pies, puddings, and so forth, is a fact, but is also a desecration.



BLEABERRY.

In similar localities, though it is more of a moisture lover than the Bilberry, may be found the Bleaberry, sometimes called the Bog Whortle-

berry (*Vaccinium uliginosum*). The fruit is rather larger than that of the Bilberry, but scarcely so good. The shrub, which seldom exceeds a foot in height, may be known from the Bilberry by the leaves, which are downy beneath, and have plain edges, while those of the Bilberry are toothed on the edges and smooth below.



JUNIPER.

In this month the berries of the Juniper (*Juniperus communis*) are ripe. It is a remarkable fact, by the way, that, contrary to the custom of most plants, the Juniper retains its fruit for two seasons, one season being insufficient to ripen the berries thoroughly. In consequence of this peculiarity, berries in all stages of growth may be found on the tree simultaneously with

the flowers and the just opening buds. The shrub may be found upon heath lands, and is exceedingly variable in height, in some places



YEW.

scarcely exceeding two feet, while in others it grows up to nine or ten feet, and, by cultivation, can be induced to grow until it can take rank as a tree. The use of the berries in flavouring gin

is well known. The greater part of the berries used for this purpose are sent from abroad.

The scarlet berries of the Yew tree are now ripe, much to the delight of some children, who are pleased to say that the berries are good eating. In fact, however, they are slimy, sickly things, and, in spite of a slight sweetness, very insipid. Children, however, will eat almost anything, and persuade themselves that they like it.



CRANBERRY.

There is a little shrub, often growing only a few inches in height, which furnishes a fruit which is really excellent. This is the Cranberry (*Oxycoccus palustris*). As its specific name imports, it loves moist places, and therefore is to be sought on low and marshy lands, just as the *Bilberry* is to be sought on higher grounds.

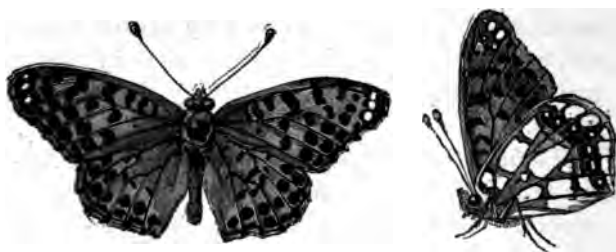
The berries have a peculiar sharply acid flavour, which is very much appreciated by many persons. The name of *Oxycoccus* signifies acid berry, and is given to the shrub in consequence of this peculiarity.

It is not to be expected that many Butterflies will be found in October. Creatures of light, warmth, and sunshine, the rapidly closing days and the ever-increasing cold thin their numbers sadly. Still, some of them are yet on the wing, among which are the latest-bred Admirals and Peacocks, which, if the season be a mild and warm one, contrive to remain on the wing until the cold weather fairly sets in. Then they betake themselves to their resting-places, and in some mysterious manner contrive to defy the severest frosts.

To my mind, the power possessed by a Butterfly in resisting cold is a most wonderful phenomenon. The fragility of a Butterfly's life is proverbial, and yet this delicate being will manage to preserve its life through the sharpest frosts, and at the summons of spring emerges in full vigour, its only anxiety being its search for a mate. Through all the months of winter it takes no food, but hangs in some secluded spot as apparently lifeless as if it had been dead, dried, and set in a cabinet.

There is only one thing that these Butterflies cannot endure, they must not be exposed to the

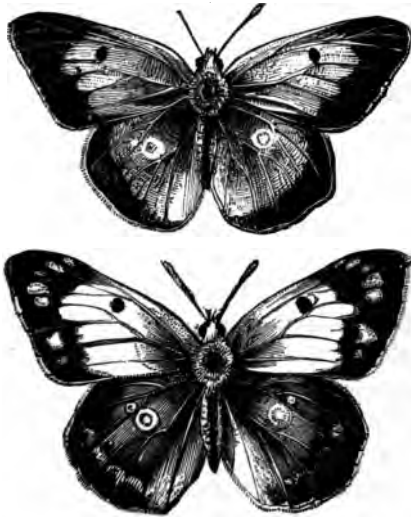
weather ; for cold itself they seem to care nothing. For example, in one or two seasons we have found that the thermometer has fallen considerably below zero, *i.e.*, more than thirty-two degrees below freezing-point. Yet, in the succeeding spring, out came the butterflies that had been hibernating since the preceding autumn, and were just as lively as if the temperature had been fifty degrees higher. But, if one of these very insects had been exposed to the weather it would inevitably have died, even though the temperature were comparatively high.



QUEEN OF SPAIN.

Somewhere about the beginning of October, the collector of Butterflies keeps a careful look out for the rare Queen of Spain Fritillary (*Argynnis lathonia*), a species not so beautiful as several of its kin, but very desirable on account of its rarity. The southern coasts are the most likely spots for this insect, and in all probability many have been seen and allowed to go free, having been

mistaken for small specimens of other Fritillaries. The sharp inner angle of the hind wing is a characteristic which is amply sufficient to determine the species. There are, moreover, near the edge of the hind wing, seven dark brown, nearly circular spots, each of which has a silver centre.



CLOUDED YELLOW BUTTERFLY.

Some of these beautiful little Butterflies, the "Hair-steaks," continue to flit about in the earlier days of October, provided that the weather be fair; and so do one or two of the Blues. In the beginning of October, however, the

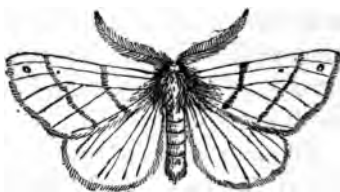
collector may have a chance of capturing that very beautiful insect, the Clouded Yellow Butterfly (*Colios edusa*). I have seen it flying on the coast near Dover, but curiously local. As far as we can see, one clover field is as good as another, but the Clouded Yellow Butterfly takes quite a different view of the case, and will be found in numbers sporting over one field, while another field, to all appearance exactly similar, will not have a Butterfly upon it.

It is a quick-flying insect, and its mode of flight is very graceful ; so that, after filling his box, the genuine entomologist will gratify his sense of the beautiful by watching the active evolutions of these pretty Butterflies.

In late years the Edusa seems to have become much more plentiful than was formerly the case, so that now-a-days every entomologist who visits the sea-side at the end of autumn may expect to obtain specimens of this beautiful insect, whose deep saffron wings, with their black-brown border, are easily recognized even during flight. Sometimes the female is very much paler than the male, being, indeed, nearly white.

Passing from the Butterflies to the Moths, we may now find the Feathered Thorn (*Himera pennaria*), so called because the antennæ of the male are beautifully feathered, those of the female being simple and threadlike. It is not a *brilliant* Moth, but it is a pretty one, the reddish

grey of its fore wings being of a very soft character, and developed by three black-brown wavy bands. The hind wings are grey at the base and tip, but warm into a nearly orange hue about the centre.



FEATHERED THORN MOTH.

The rare Dotted Chestnut Moth (*Dasyampa rubiginea*) may now be found. Like the Clouded Yellow Butterfly, which has been already described, this insect has become much more plentiful



DOTTED CHESTNUT MOTH.

of late years. It is interesting to all lovers of nature to see how curiously the living inhabitants of the earth ebb and flow, so to speak, over certain localities, so that what we gain in one way we lose in another. Take, for example, the now

complete extinction of the Large Copper Butterfly, which is much to be regretted ; and the rapidly approaching extinction of the Swallow-tailed Butterfly, which is, if possible, even more to be regretted, as the latter insect is so much handsomer than the former. We are decidedly losers as far as these insects are concerned, but then we are gainers with regard to others, which, from being the rarest of the rare, have become comparatively well known.

One of the late appearing Moths is the Autumn Green Carpet (*Cidaria miata*), a pretty pale-green insect, having the wings traversed with zigzag marks of white, brown, black, and grey. It may be seen flitting about the ivy blossoms, and throughout the colder months of winter may be found in outhouses and similar places. Here the Moth hibernates, and in the following spring deposits her eggs, much after the fashion of the common wasp. The male is not known to hibernate, and it is supposed that all the males die before the winter.

Two of the Quaker Moths are now to be found. They generally assume their perfect state in September, and remain on the wing throughout the greater part of October. They may be found on the ivy blossom and the yew-berries. One of them is known by the popular name of the Red-line Quaker, and the other is called the Yellow-line Quaker ; the former

having a narrow reddish line round a large spot on the side of the fore wings, and the latter having the wings themselves of a yellow-ochre colour. They belong to the genus *Orthosia*.

The Pearly Underwing (*Agrotis saucia*) also appears in October, such specimens belonging, according to several practical entomologists, to a second brood, the first appearing about May, and the second from August to October. It is a near relation of the terrible Turnip Moth (*Agrotis segetum*), which works such havoc in the fields. The Pearly Underwing is rather a capricious insect, in some seasons being very plentiful, and then scarcely a specimen being seen for several years.

The emigration of birds still continues. The last of the Swallows and Martins now take their departure, and by the middle of the month scarcely one will be seen. So does the Landrail, whose jarring cry has long been silent, and the Water-rail likewise departs. The pretty Redstart also goes, and not until next April shall we see the sudden flash of ruddy feathers as the bird darts off in alarm at the approach of a human footstep. Some of the less familiar birds also leave us in October, among which are the Hobby, the Redshank, and the common Sandpiper.

Their places are, however, filled up by other arrivals. The pretty little Dabchick, or Lesser

Grebe (*Podiceps minor*), now makes its appearance and may be seen in almost every retired and quiet pool or pond.

This little bird is well worthy of notice. It is at once timid and fearless. It is easily startled,



DABCHICK.

yet soon learns to find out whether it is likely to be injured ; and if it discovers that there is no danger, it becomes quite bold and familiar. For example, while travelling by railway, I have *often seen the Dabchick* quietly swimming in

the water just under the bridge over which the train was rushing with a roar and rattle that seemed enough to frighten any timid bird far from such a noisy spot; yet the Dabchick had instinctively found out that the quickly-succeeding trains did no harm, and so it remained quite undisturbed in spite of the noisy engine and ponderous train.

I have once succeeded in getting close to such a pool, and managing to watch the ways of the little creature while myself unseen. Its capacities for diving are really wonderful. It makes no preparation, but down it goes at once with a pop, remains out of sight until it seems as if it must be drowned, when up it comes again, buoyant as a cork, and just as dry. Like several other diving birds, it can, however, sink itself gradually, but this plan it seldom, if ever, seems to adopt when undisturbed, and not in fear of a distant foe which it wishes to evade.

The brightly-coloured Teal also arrives somewhere about the middle or end of October. When in full plumage, this is really a brilliant bird, with the bright-green stripes over its cheeks and across its wings, its chestnut head and its delicately pencilled body.

They are active birds during the night, at which time they feed, resting during the day. Sometimes they prefer to lie asleep on the water, but they generally repose on the shore, getting

under shelter of reeds, grass-tufts, or low-lying bushes. In some parts of the United Kingdom, and especially in Scotland and portions of Ireland, the Teal remains through the year ; but throughout the greater part of England, it is a migratory bird, arriving somewhere towards the end of October, and going away in March.

NOVEMBER.

WITH November the winter-tide approaches, though often a sort of after summer makes the beginning of the month exceedingly pleasant. This brief second season, however, never lasts very long, and a few days see us fairly in winter. Yet, in spite of the cold weather, we have a few flowers to cheer us.

The Ivy-leaved Speedwell, which has already been mentioned, still keeps its blossoms, and so does the Annual Meadow Grass (*Poa annua*), which has been in flower ever since March. One or two other members of the genus may remain in blossom if the season be not a very cold one, but the present species may almost always be found with its flowers still unfaded. They are but tiny and inconspicuous flowers, but yet flowers they are, and we are always glad to see flowers, however small, in a winter's month.

The Ivy-leaved Snapdragon still retains its pretty little purple flowers, and sometimes keeps them until the first few days of December. In sheltered places, some of the Fumitories are yet

in flower, especially the Common Fumitory (*Fumaria officinalis*), which can be found under hedgerows and in similar localities.

About the beginning of this month the Spindle Tree (*Euonymus europæus*) can be seen at its very best. It is not a very remarkable tree in the earlier part of the year, and, strange to say, not until its leaves have fallen, does it show forth its beauties. These consist of the innumerable seed vessels, which are so flower-like in their beautiful pink colour, that they might easily be mistaken for the blossoms.

The illustration (see page 55) shows a small branch of the tree as it appears while the leaves are yet on the tree, but dry, ruddy chestnut in colour, and ready to fall at the first blast of a storm. Four of the seed vessels are shown as they appear when closed, and the other three as open, the latter looking even more flower-like than the former, and disclosing the round orange-coloured seeds.

At Fig. *a* is shown the little pale green flower as it appears in spring—so small and insignificant that to no eye, except that of a botanist, does it give any indication of the lovely seed-vessel which will in due time be developed from it. I need hardly mention that the name of Spindle is given to this tree, because the very even grain of the wood renders it a fitting material for the manufacture of spindles and similar articles.

In November the Elderberry is in its prime, for, like the blackberry, it never seems to attain



FLOWER OF SPINDLE.

its full flavour until it has been touched by the first frost of the approaching winter. The wine which is made from the berries is well known to



THE ELDER.

those who have had the opportunity of passing a few days in a well-to-do country farm-house, where the mulled elderberry wine is sure to be produced in the course of the evening. The

deep rich black purple of the berries is familiar to us all ; but there are some varieties of the Elder, in which the berries never lose their greenness, even when perfectly ripe, and others in which the berries when ripe are nearly white instead of black.

Even in this cold dreary month, we are not wholly without reminiscences of the summer that has passed away, and one or two pretty insects are yet to be seen. There is, of course, the well-known Brimstone Butterfly, which is sure to make its appearance in every month throughout the year. Then there is the bright little Common Copper Butterfly (*Polyommatus*



THE COMMON COPPER BUTTERFLY.

Phlaeas). This charming little butterfly is found in most parts of England, and it is seen throughout the greater portion of the year, flitting over the pasture lands, or settling on the wild flowers, and glittering in the bright sunshine. It is one of our earliest as well as latest butterflies, and many practical entomo-

logists think that it has three distinct broods—one appearing in April, another about Midsummer, and the third in August. If this be so, those specimens that are seen later in the year must belong to the third and last brood. Mr. Newman, in his valuable work on the British Butterflies, makes the following remarks concerning this insect :—

“Without that attention and unremitting observation which I believe has not hitherto been bestowed on the subject, I am unable to say with anything approaching to certainty, whether we have one, two, or three broods of this brilliant little butterfly in the course of the year ; its greater abundance at the beginning of June, the beginning of August, and beginning of October, favour the idea that there are three broods ; and it is quite certain that many of those caterpillars which we find during the entire month of August, and which become chrysalids in September, appear as butterflies at the end of that month or the beginning of October. Are we to suppose that some of the chrysalids remain in that state throughout the winter, and do not expect their final change until the following summer, so that the October and June flights are early portions of the same brood ?”

Why should not some of my readers try this question for themselves, and watch for several

successive seasons the development of this lovely little insect? The caterpillar is common enough, but scarcely ever seen except by those who know what to look for and where to look for it. It feeds on several species of dock, and mostly keeps itself to the under surface of the leaf. Though prettily coloured with green and pink, the caterpillar is not a very sightly creature except to the eye of an entomologist, being flat, and slug-like in shape as well as in movements.

These larvæ have been found feeding on dock leaves as late as the middle of December. As for the butterfly itself, it is seldom found later than October, but, as it has been seen in November, I place it among the very few butterflies which we can even hope to see at such a time of year.

The beautiful Clouded Yellow (*Colias edusa*) which was described in our account of October, may still be found, its rich colouring making it a very welcome addition to the now sombre scenery.

Several moths are to be found in this month, the chief of which takes its name from the time of year at which it makes its appearance, and is called the November Moth (*Oporabia dilutata*). It is plentiful over the whole of England, simply coloured, and, like most simple insects, difficult to describe, especially as it is liable to consider-

able variation. Suffice it to say that it is a somewhat slender-bodied moth, with its upper wings of a pale greyish brown, across which are drawn a number of various waved bars of a darker brown. The number, shape, and hue of those bars are, however, so variable, that scarcely any two specimens have them exactly alike. So variable indeed is it, that some six or seven varieties of it have been considered by different entomologists as distinct species, and recorded as such in their catalogues.

The caterpillar of the November Moth may be found on most trees, and is a very pretty creature, the colour being bright green, diversified with purple. It is, however, nearly as variable in colour and markings as is the perfect insect, in many specimens the purple marks being almost or wholly absent.

There is a closely allied insect called the Autumnal Moth (*Oporabia filigrammaria*), which is found in Scotland and the northern parts of England. It is smaller than the November Moth, and the bars on the upper wings are much narrower and more thread-like—a characteristic which is expressed in the specific name *filigrammaria*, or thread-lettered. This word, by the way, is a simple atrocity, as are many scientific names, the first portion of it being Latin and the second Greek.

One of the rarest of our British moths is noted

for its appearance in November. It is called the Red-headed Moth (*Cerastis erythrocephala*), because the head, throat, and body are grey, with a sort of red. It has been taken near Brighton, and comes to sugar. As it is one of the night-flyers, and is a soberly-coloured insect, its wings being warm grey, with black, brown and grey markings, it is not likely to be noticed except by practised entomologists, so that it is very possible that many specimens have been seen and dismissed as being merely common Noctuas.

The entomological reader will doubtless remember that this is the case with that very scarce insect the Bath-White Butterfly. Nearly all the specimens of this insect have been taken by children, who catch everything that they can see, whereas an ordinary entomologist would pass over the insect as one of the common white butterflies.

The reader will remember that, in the account of October, mention was made of the Autumn Green Carpet Moth (*Cidaria miata*). An allied insect, the Red-green Moth (*Cidaria psittacata*), makes its appearance in November. It derives its popular name from its colouring; it is green-grey, with a few pale bars and two blotches of reddish grey on each of the upper wings. Like the Autumn Green Carpet, this moth may be found on the blossoms of ivy and laurustinus,

and is mostly a southern insect. The larva feeds on oak leaves.

Now for our migratory Birds. Is the Hobby (*Falco sub-buteo*) a migrant or not? Some practical naturalists assert that it is so, while others as decidedly affirm that it is not. As far as we can see, both are right, as is often the case in a disputed question of this kind. Like many other birds, the Hobby appears to be a partial migrant—*i.e.*, remaining stationary in some parts of the kingdom, while in others it migrates from one portion of Great Britain to another. In those parts of England where it is migratory, the Hobby selects either the latter end of October or the beginning of November for its journey, the precise time depending much upon the weather. In such places it re-appears about April.

It is a beautiful little hawk, active, dashing, and courageous, and has been successfully trained as a falcon, being by nature endowed with the instinct which teaches it to tower above the bird which it is pursuing. Weighing on an average only from seven to ten ounces, the Hobby looks a very much larger bird than it really is, on account of the large beak and talons, and the great development of the wing.

The Hobby builds, when it is obliged to build, in tall trees, especially the fir and pine, and always chooses some tree where the nest is

almost inaccessible; but, like many other hawks, it never builds a nest if it can find a suitable domicile ready made, and accordingly takes possession of the deserted nest of a crow or a magpie. In consequence of this habit among the hawk tribe, it is as well for all egg-collectors to examine every such nest which they may find, no matter whether or not it may appear to be deserted.

The same birds generally return to the same nests year after year, if they are not disturbed. They do not seem to miss a few eggs, provided that they are away from their home when the eggs are removed; and thus, by careful management, a single nest may be made to yield quite a supply of eggs, if the collector can only restrain the natural desire to secure the whole batch at once. I very much fear that, whenever I found a hawk's nest of any kind, I used to take all the eggs, justifying myself on the grounds that if I did not somebody else would, and I might as well have the eggs as leave them for another collector.

Another of these partial migrators is the Gold-crest (*Regulus cristatus*), some of which stay here throughout the year, but many others migrate, arriving at the end of autumn and leaving us in the spring. Unfit as such tiny birds appear to be to resist the inclement weather of our winter, they seem to care little



GOLD CREST AND FIRE CREST.

for mere cold, and may be seen in the depth of winter scudding up and down the branches, and busily picking out the insects from the crevices in the bark.

I well remember a certain large "Blenheim Orange" apple-tree, which was a favourite resort of the Gold-crest. It was a fine old tree, with rough and rugged bark, under which multitudinous insects could shelter themselves. On this tree I have often watched the lovely little Gold-crest racing about the branches, with a movement almost exactly like that of the creeper, its smaller size, however, distinguishing it at once, not to mention the golden crest, which is occasionally raised and then lowered.

The Fire-crest (*Regulus ignicapillus*) may sometimes be seen in the same localities as those chosen by the Gold-crest. It is a very rare bird, but in all probability it is really more common than it appears to be, owing to its resemblance to the Gold-crest, for which it might easily be mistaken. Both birds have a similar olive-green body, similar brown wings, crossed with two white bars, and a similar crest, edged on each side with black. In the Gold-crest, however, this distinguishing portion of the bird is golden yellow, while in the Fire-crest it is fiery red.

Somewhere about the end of November, that beautiful and rather scarce bird, the Waxwing,

sometimes called the Bohemian Chatterer (*Bombycivora garrula*), makes its appearance. It is a very conspicuous bird, and is at once recognizable by the singular appendages to the wings, from which it derives its popular name. Several of the secondary feathers of each wing are tipped with a flat, scarlet, horny plate, looking exactly as if it were made from red sealing-wax. The number of these appendages is very variable, and specimens have been known in which they appeared even on the ends of the tail feathers.

The Waxwing is provided with a crest, which it can raise or lower at pleasure. Usually the bird keeps it lowered, but now and then it raises the feathery tuft, thus giving itself a strikingly different aspect. It is a gregarious bird, so that when it does show itself in this country it generally may be seen in some numbers. Unfortunately, it finds but little encouragement to stay here, for any Waxwings that show themselves are always obliged to run the gauntlet of all the guns in the neighbourhood. Let us hope that if any of these birds visit us the law will protect them for the future, and give them some encouragement to take up their quarters permanently among us. As it is, scarcely anything is known of the habits of this pretty bird.

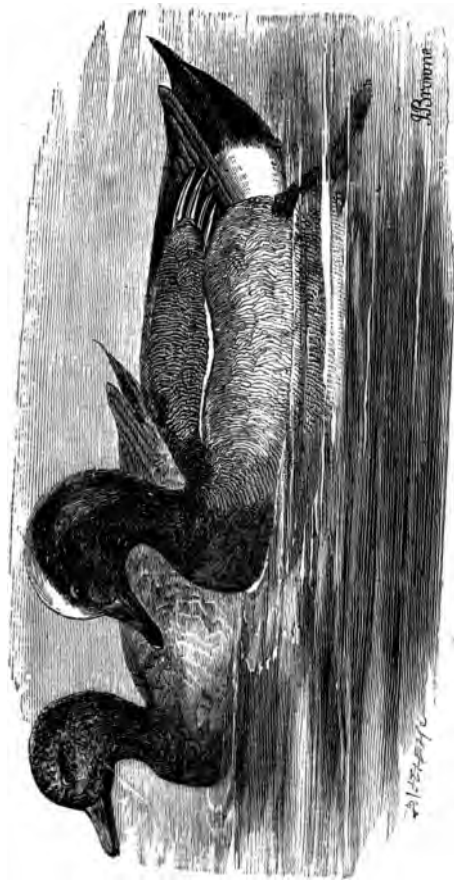
November is sure to bring in its train one

of our most accomplished diving ducks, the common Pochard, sometimes called from its colour the Red-headed Poker, or Dun Bird. It is a singularly handsome and conspicuous bird, the ruddy chestnut of its head and neck, separated from the pencilled body by a broad band of velvety black, at once serving to distinguish it from other ducks.

Being a timid and wary bird, it employs its powers of diving whenever it is alarmed, and stays under water for a wonderfully long time. It is so good a diver, indeed, that when taken, together with other birds, in the decoys, it dives as soon as it takes the alarm, and making its way under water to the entrance of the tunnel, contrives to escape.

Owing to the size of the bird, its beautifully rich colouring, and its wonderful powers of diving, the Pochard is in great favour as a bird for ornamental water, and, even when surrounded by Golden-eyes, Pintails, Shovellers, and other ducks, is nearly the most conspicuous among them. About three miles from my house is a piece of ornamental water, the owner of which takes a great delight in the richly-coloured ducks with which he keeps it stocked, and in none more than the Pochards, whose round, ruddy heads rear themselves conspicuously among their fellows.

As in their native haunts they are rather



WIDGEON.

marine than fresh-water birds, the necessity for great powers of diving is evident. They generally keep seawards during the day and in fine weather, returning to the shore at night and when the wind rises.

The last migrator that can be mentioned is the Widgeon (*Anas Penelope*), that richly-coloured little duck which is better known to most of us on the table than on the water. In the spring, the Widgeon, which likes a cold climate, goes off northwards for the purpose of breeding, and returns to this country at the end of autumn, the precise date not being very certain. This is one of the prettiest of our ducks, the warm chestnut of the cheeks and neck, the waving yellow crest on the top of the head, the ruddy breast, the pencilled body, and the green-banded wings making a lovely combination of harmonious colouring.

DECEMBER.

BRAVE must be the plant that can blossom in this cold, dark, stormy month, Yet there are one or two that are hardy enough to gladden our eyes with their welcome blossoms. Kind owners of singing-birds welcome the common Groundsel, whose succulent green leaves, yellow, composite flowers, and white seed-tufts are so conducive to the health of the little feathered favourites. Another plant much loved by the singing birds, namely, the common Chickweed, is also in blossom, having the capacity for flowering throughout the entire year, and for being found in almost any waste piece of ground, however small. And, as both these plants are very hardy, they can be transported into the very midst of London, and seem to flourish perfectly well in the very heart of the smoke-be-grimed city.

There is yet another plant which the birds love, which also flourishes throughout the entire year. This is the well-known Shepherd's Purse (*Thlaspi* or *Capsella Bursa-pastoris*), to whose

flowers and seeds most singing birds are exceedingly partial,

Another of these hardy plants is the Red Dead Nettle (*Lamium purpureum*), which may be found throughout the year, its purple or pink blossoms bearing equally the burning sun of summer and the chill blast of mid-winter. As for the Daisy, its starry little flowers are always to be seen wherever you may be, the seemingly delicate little flower being quite strong enough to endure the winter's cold.

The Insects which appear in December are necessarily few. Beetles are not to be seen, for there are few insects so intolerant of cold as they are. While digging for pupæ in December, I have often turned up large Ground-beetles



GROUND BEETLE.

(*Carabi*) that had retired below ground for the winter. I never knew one of them able to make its escape. As the unwelcome light streamed upon them they ran for a few steps with great agility, and looked as if they would run away altogether. But, before they had gone more than a few inches, they became, as it were,

paralyzed by the cold, stopped, struggled, rolled over and died.

Even the black, fierce Devil's Coach-horses, the large Rove Beetles, which are so plentiful about carrion, and do so good a work in removing it, cannot endure a sharp frost, and though



ROVE BEETLES.

they open their sickle-like jaws, and turn up their tails with their accustomed menacing air, they succumb to the cold almost as soon as the Ground-beetle. I have seen bees perish in just the same way, when suddenly exposed to a frosty atmosphere.

The Water-beetles still ply their oars as

merrily as if the summer's sun were pouring its warm beams upon them, and are nearly as active and voracious when the water is covered with a sheet of ice as they are in the hot days of summer. Although they are thus active in the water, I very much doubt whether they are equally active out of it, and fancy that if one of these insects were to quit the pond and take to the air, it would be greatly affected, if not absolutely killed, by the cold.

With the exception of the perennial Brimstone, butterflies there are none, unless an exceptionally warm, sunshiny day should tempt into the open air some Peacock, Admiral, or Tortoiseshell Butterfly that has been in a state of hibernation since the beginning of the cold weather. Even those insects soon find that they ought not to be too venturesome, and, finding that the spring season has not arrived, and that there are no leaves on which they can lay their eggs, they retire afresh to their resting-places, and compose themselves for another sleep of three months' duration.

There are very few Moths, but there are one or two, the first of which takes its name from the month, and is called the December Moth (*Pæcilocampa Populi*). This is a tolerably handsome, though not brilliantly coloured Moth. The upper wings are mahogany-brown, becoming rather paler as they approach the tips,

and they are crossed by two narrow wavy, greyish-white lines, one near the base and the other across the middle. The lower wings have a similar line across their middle, so that when the wings are spread, the two lines seem to be continuous.

The name *Pœcilocampa* signifies beautiful caterpillar, and is given to the insect on account of the beauty of the larva, which is black, grey, and white, and has a yellow stripe along each side. It feeds upon the oak leaves. The most curious point about this insect is the length of time which it sometimes passes in the pupal state. When well fed, it spins a cocoon, and mostly assumes the perfect state in the December of the same year. Often, however, it waits for another twelve months, and has been known to remain in the cocoon for five years before the moth has made its appearance.

Another and very common moth is also found in December. This is the Chestnut Moth (*Cerasti Vaccinii*), another small and stout insect measuring about an inch and a half across the wings, and being, as its name implies, of a chestnut colour, the lower wings being paler than the upper pair. Although so plentiful, it is scarcely known to the general public, because it is a night-flyer, and is hardly ever seen by day. After dusk, however, it is abundant, and may be taken in almost any numbers by sugaring. It

generally lives through the winter, and remains until the following spring.

The most common of the December moths is the well-known Winter-moth (*Cheimatobia brumata*), which may be seen throughout the winter, flitting about the hedgerows, and starting from them as the boughs are shaken. Only the males are thus seen, the females possessing



WINTER MOTH.

the merest rudiments of wings, and being therefore unable to fly. And though the males are day-flyers, the females hide themselves during the daytime, and only venture into the open air after the hours of darkness have set in.

Perfectly harmless as is the moth itself, it is, in its larval condition, one of the most destructive of our insects, and when it takes possession of an orchard does very great damage. Before the habits of the Winter Moth were known, its ravages were almost irremediable, but, at the present day, when we do understand the insect, there is no excuse for allowing the orchard to be seriously injured.

The caterpillar, after feeding on the leaves of

the trees, crawls into the earth, and there undergoes its changes. Now, as the females have no wings, it is evident that they can only ascend the trees by means of their legs, so that effectual precautions can be taken against them. Mr. Newman who has studied these insects with great care, suggests that by hand-picking and tree-painting, the Winter Moths can be shorn of their terrors, and the orchard-owner feel certain that but little damage will be done to his trees.

As the females come out by night and then ascend the trees, the gardener should take a lantern nightly, and carefully examine the trunks of the trees, and destroy all the wingless females that are seen crawling upon them. In this way many hundreds will be killed in a single night on only a few trees. By this plan, the females are killed before they have been able to deposit their eggs, and so the death of each moth is equivalent to the destruction of a hundred caterpillars, or thereabouts. The males may be let alone.

It is, however, impossible to keep men employed all night in moth-catching, and so the second plan, namely, tree-painting, comes into operation. This is done by painting a broad belt of some sticky composition round the tree, so as to catch the female moths as they try to ascend. Mr. Newman recommends a mixture

of Stockholm tar and cart-grease in equal parts, as it remains adhesive for several days, and does no harm to the trees if applied in the last quarter of the year—say, from the middle of October to the end of December. I should fancy that bird-lime would be useful for this purpose. Not possessing an orchard, nor, indeed, any standard fruit-trees, I have not tried either material, and therefore cannot speak with the weight of personal experience.

Plenty of migratory birds arrive during this month, most of them being either marine or aquatic. The Pintail Duck, for example, so conspicuous for the long, sharp feathers of its tail, arrives either at the end of November or the beginning of December, according to the weather. It is plentiful in the fen counties, and is sent in great numbers to the London market, where specimens can be obtained in tolerable perfection, save for the inveterate practice of hanging them up by a hook through the beak. These birds are in much estimation in ornamental waters.

In its own haunts the beautiful and useful Eider Duck (*Somateria mollissima*) makes its appearance. The male is more handsome than his mate. She is simply brown, mottled with a deeper hue, while he is resplendent in white, green, chestnut, and black. But it is the female that produces the Eider-down with which we



EIDER DUCK.

are so familiar, and the best down is that of the female, known by its colour.

It is used by the female as a bed in which her eggs repose, and as fast as she deposits it, the down-hunters take it away. At last the unfortunate duck exhausts all her own supply of down and has then to fall back on the assistance of her mate, who supplies its place with down from his own body. This, however, is inferior to that of the female, and is known by its white colour, and as soon as any white down appears in the nest, the hunters leave the birds in peace to bring up their young brood.

It is said that the wonderful elasticity of this down only exists when it is taken from the living bird, and that if an Eider Duck be shot and the down at once plucked from her breast, it would not be nearly as elastic as if the bird had pulled it from her own body and laid it in the nest.

There are one or two exceptions to the general rule respecting the December migrations. One of them is the Lapland Bunting (*Plectrophanes nivalis*), often called the Snow-fleck on account of the colour of its plumage during a severe frost. These beautiful little birds arrive in little flocks, preferring the northern to the southern parts of Great Britain. It is a very remarkable bird, for its plumage changes in accordance with the temperature,

just as does that of the Ptarmigan or the fur of the Stoat. During the warmer months, the plumage is brown and black, with some white speckles. In the winter, however, while the back and wings retain their black-brown hue, the rest of the plumage is snowy white.

In consequence of this variation in the colouring of its feathers, the bird is known by a variety of names, such as Snow-Bunting, Tawny Bunting, Great Pied Mountain Finch, Brambling, and so on. Most of the Snow-flecks that come to England remain north of Yorkshire, the comparatively temperate climate of the southern counties not suiting the constitution of this cold-loving bird.

Another migrator, the Hawfinch, or Grosbeak (*Coccothraustes vulgaris*), is less plentiful in point of numbers than the Snow-fleck, but is more generally distributed over England. Its timid and retiring habits make it appear a much rarer bird than it really is, and though Hawfinches may dwell in a certain neighbourhood, they may certainly escape observation.

For example, some few years ago, a neighbour of mine, an enthusiastic ornithologist, fancied that he had heard the peculiar cry of the Hawfinch, and, as he was anxious to procure the bird for his collection, he asked me to accompany him in a search for it. So we started next morning, well before sunrise, and took our

stations in the neighbouring park, taking care to stand against the trunks of trees, so that this most watchful of birds might not detect us. The sun had scarcely risen before the same cry was heard, and a pair of Hawfinches came flying about directly over us, the birds evidently having no suspicion that gun-bearing foes would be out at that hour. They happened to be just out of shot, but by dint of rising at the same hour and waiting for the birds, the patient ornithologist at last secured one.

So ends our Calendar of the Months. We have passed through the year in company with Nature, and each successive month has yielded us subjects of interest, amusement, and instruction. In succession, the vegetable and animal worlds have been laid open to us, and whether the month be cold and dreary, as in January or December, bright and shining, as in May, burning with almost tropical heat, as in July and August, no single month is without its deep interest for those who have eyes and choose to employ them.

THE END.



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